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MAXIM INTEGRATED PRODUCTS, INC.

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
SAN JOSE DIVISION

QUANTUM LABS, INC.,

Plaintiff,

v.

MAXIM INTEGRATED PRODUCTS, INC.,

Defendant.

AND RELATED COUNTER-CLAIM.

Case No. 5:18-cv-07598-BLF

**EXHIBIT F TO JOINT NOTICE OF
COMPLETION OF CLEANUP, JOINT
NOTICE OF SETTLEMENT AND
[PROPOSED] ORDER TO VACATE
DATES AND DEADLINES**

Courtroom 3, Fifth Floor
Judge: Hon. Beth Labson Freeman

Trial Date: September 26, 2022

Dated: June 21, 2022

ROPERS MAJESKI PC

By: /s/ Kevin W. Isaacson

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PRODUCTS, INC.

EXHIBIT F



AERO-ENVIRONMENTAL
CONSULTING



INITIAL SAMPLING AND ANALYTICAL PLAN (SAP)

QUANTUM LABS DECONTAMINATION PROJECT

PREPARED FOR:

**QUANTUM LABS
2108 BERING DR. UNIT B
SAN JOSE, CA 95131**

PREPARED BY:

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October 13, 2021



AERO-ENVIRONMENTAL
CONSULTING



SIGNATURE PAGE

QUANTUM LABS COBALT DECONTAMINATION PROJECT

INITIAL SAMPLING AND ANALYTICAL PLAN (SAP)

SAP preparer:
Project Superintendent:

Jorge Vizcaino, CIH (Aero-Environmental Consulting)
Wendy Planck (Aero-Environmental Consulting)

Date of Issue:

October 13th, 2021

This report prepared by:

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1.0 INTRODUCTION

Aero-Environmental Consulting, Inc. prepared this initial sampling and analysis plan (SAP) for the Quantum Labs industrial facility located at 2108 Bering Dr. Unit B in San Jose, California. This document was prepared under our Professional Services Agreement (PSA) between Quantum Labs and Aero-Environmental Consulting dated September, 2021. Under this PSA, Aero-Environmental will provide documentation, collect dust (vacuum) samples for analysis of cobalt, collect air samples for cobalt analysis, and if needed, collect additional surface wipe samples, in addition to those wipe samples that were collected by SafeBridge Consultants in October 2017 (Appendix A). The Quantum Labs site is divided into thirteen zones, as depicted on Figure 1. The purpose of the Industrial hygiene assessment is to evaluate whether cobalt contamination exists at concentrations above the pre-agreed surface contamination Brookhaven National Laboratory (BNL), free release level of $2 \mu\text{g}/100\text{cm}^2$ (Appendix B). Site assessment and decontamination activities are anticipated to be conducted from October 2021 through December 2021.

This current SAP was developed based on our review of the previous sampling conducted by SafeBridge Consultants as well as a proposed scope of work developed by ERM on November, 2020. This SAP includes updated references to contract specific standard operating procedures (SOPs) that have been developed in support of decontamination activities at this site. It also updates screening levels and general sampling methodology to accurately reflect conditions encountered at the site during our preliminary site evaluation conducted in June 2016 as well as initial sampling conducted by SafeBridge Consultant in November, 2017. This plan will be used to guide field sampling in October 2021, including:

- Pre-Cleaning Micro-Vacuum Dust Sampling – Aero-Environmental will collect indoor dust samples using vacuum dust sampling techniques from the interior offices and common use area to support the evaluation of potential threats to human health posed by cobalt exposure. A minimum of seven and a maximum of ten dust samples will be collected in these areas. Samples will be submitted for laboratory analysis for cobalt.
- General Area (GA) Samples. The sampling equipment is placed in a fixed location in the work areas. General area samples are not used to evaluate employee exposure. They may be used to determine whether reentry is warranted into a contaminated area, if there is potential contamination of adjacent work areas, or to verify the integrity of a negative pressure enclosure during cobalt rip out operations. They may not be used for OEL compliance determinations except in the rare instances where no feasible personal sampling method exists.
- The collection of surface contaminants, generally referred to as “wipe sampling”, is an important IH technique to estimate contamination on a variety of surfaces, including those in work areas, common areas, offices, etc. When implemented following a validated method, the technique is a quick and easy means of assessing the level of contamination that may reside on the surface. Wipe samples can be taken to assess exposure to cobalt metal dust. Procedures can vary widely, depending on the contaminant of interest and the surface sampled. The procedure used for a collecting a specific analyte on a given surface is an important part of whether or not the results generated will be representative of the contamination.

This SAP outlines project objectives in Section 2.0; describes field sampling activities and procedures in Section 3.0; presents laboratory analytical methods, and actions initiated by results above screening levels, and sample handling procedures in Sections 4.0, 5.0, 6.0, and 7.0; and specifies quality assurance (QA) and quality control (QC) requirements in Section 8.0.



2.0 PROJECT OBJECTIVES

Aero-Environmental will provide site documentation, collect vacuum dust samples to be analyzed for cobalt, collect air samples for cobalt analysis and, collect post-remedial samples after decontamination by BELFOR Environmental. The purpose of the initial industrial hygiene assessment is to determine whether additional cobalt contamination exists at concentrations above the BNL "free release: clearance criteria of 2 µg/100 cm², evaluate whether additional cobalt contamination may be present within this facility that was not discovered during the evaluation conducted by SafeBridge Consultant in November, 2017, and develop a site decontamination protocol or specification document. Site assessment activities are anticipated to be conducted from October 2021 through December 2021.

3.0 FIELD SAMPLING ACTIVITIES AND PROCEDURES

This section outlines and provides rationale for the proposed field investigation activities, as well as procedures for sampling and data collection. As described in Section 2.0, the primary goals for the sampling are threefold: (1) to evaluate the potential threat to human health caused by exposure to cobalt and to determine whether additional cobalt contamination exists at concentrations above the BNL "free release: clearance criteria of 2 µg/100 cm²; (2) to evaluate whether additional cobalt contamination may be present within this facility that was not discovered during the evaluation conducted by SafeBridge Consultant in November, 2017; and (3) develop a site decontamination protocol or specification document.

3.01 Pre-Cleaning (Decontamination) Vacuum Dust Sampling

Indoor dust will be sampled at this facility as part of the initial industrial inspection to assess potential human health cobalt exposure in common areas and offices within this facility. Dust will be sampled in accordance with ASTM Methods D7144 and D5438 for micro-vacuum sampling. A minimum of seven and a maximum of ten discrete dust samples may be collected in the common areas and offices of this facility. One composite sample that includes up to five subsamples may be collected from the attic, if an attic exists, if the occupants can routinely access the attic (by stairway or ladder/trap door), and if the occupants use the attic. If collected, the attic sample will be collected by vacuuming the exposed horizontal surfaces in the attic, such as rafter tops or flooring. If vermiculite or suspected or known asbestos is visually observed in the attic or noted by the facility manager, no sampling in the attic will occur. Instead, all samples will be collected within the common areas and offices of this facility.

Areas sampled inside this facility will be collected from the main office (Simon's office), Lobby area, Engineering office, and any other carpeted areas.

The total floor area vacuumed for each dust sample will depend on the volume of dust present in each sampling area. The floor area where dust is collected will be measured and recorded to calculate the dust and cobalt loading for different parts of the facility. If there is not enough dust present in the common areas or offices of the facility to collect discrete samples for analysis, the discrete vacuum samples may be composited. Under no circumstances will attic samples be mixed with discrete or composite common areas/office samples.

Samples will be identified by a unique sample identification number as described in Tables 1 and 2 below.

TABLE 1- GENERALIZED VACUUM/WIPE DUST SAMPLE IDENTIFICATION SCHEME

Media	Site	Sample Location	Location Identifier	Date	Example Identification	Notes
Indoor Dust	QUANTUM LABS	2108 Bering Drive, Bldg. B, San Jose, CA	L-Lobby EO-Engineering Office MO-Main Office LR-Lunch Room A-Attic	102021 October 20, 2021	QL-345-L-102019	All sample locations will have distinct sample IDs.



3.02 Airborne Dust Monitoring

Filter sampling is used to evaluate potential airborne particulate hazards, such as dusts, fumes, mists, and aerosols. For filter sampling, a pump is used to actively pull a known volume of air through a filter appropriate for the hazard. After the particulate matter (PM) has been deposited on the filter, the concentration (mass) of the analyte of interest (cobalt) can be determined by analytical methods, which include microscopic counting, gravimetric analysis, atomic absorption, atomic emission, or mass spectrometric techniques.

General Area (GA) Samples. The sampling equipment will be placed in a fixed location in several work areas, common areas, and office areas. General area samples are not used to evaluate employee exposure. They may be used to determine whether reentry is warranted into a contaminated area, if there is additional potential contamination or work areas or adjacent work areas, or to verify the integrity of a negative pressure enclosure during cobalt decontamination operations. They may not be used for OEL (occupational exposure limit) compliance determinations.

TABLE 2- PROPOSED AIR SAMPLING IDENTIFICATION SCHEME

Media	Site	Sample Location	Location Identifier	Date	Example Identification	Notes
Indoor Dust	QUANTUM LABS	2108 Bering Drive, Bldg. B, San Jose, CA	L-Lobby EO-Engineering Office MO-Main Office LR-Lunch Room CR-Clean Rooms LQ-Lab Q LM-Lab M WCR-Warehouse Clean Room	102021 October 20, 2021	QL-345-L-102019	All sample locations will have distinct sample IDs.

Air samples for cobalt dust will be collected using low volume air sampling pumps and analyzed via NIOSH 7300/7303 Analytical Method using instrumentation such as Cold Vapor Atomic Absorption (CVAA), Inductively Coupled Plasma (ICP), and Inductively Coupled Plasma Mass Spectrometry (ICPMS).

The flow rate through the sample collection device will be determined for each individual sampling pump before field use (pre-calibration, same day) and after field use (post-use flow-rate check, same day).

3.03 Surface Sampling

A. OVERVIEW

The collection of surface contaminants, generally referred to as “wipe sampling”, is an important IH technique to estimate contamination on a variety of surfaces, including those in work areas, common areas, offices, mechanical/ventilation equipment, and skin. When implemented following a validated method, the technique is a quick and easy means of assessing the level of contamination that may reside on the surface. Wipe samples can be taken to assess exposure to cobalt dust. The procedure used for a collecting a specific analyte on a given surface is an important part of whether or not the results generated will be representative of the contamination.

The National Lead Poisoning Prevention Program has documented procedures for wipes and sample collection (OSHA, 1999; ASTM, 2010; ASTM, 2011).

Prior coordination with the analytical laboratory where the samples are going to be analyzed is therefore needed before these types of samples are submitted.



B. SAMPLING PROCEDURES

1. Wipe Sampling Media. For metals sampling, individually wrapped, pre-moistened wipes/towelettes are recommended. In all cases, sampling media must be chosen (and precleaned if necessary) to minimize potential sample contamination (that could result from the presence of the contaminants of interest in the wipe media itself).
2. Wipe Template. A template of known dimensions will be used to outline the sample area. The template material (e.g. aluminum, plastic, disposable manila paper template) will be compatible with the wetting agent, and will not introduce contamination.
3. Sample Collection. A new pair of disposable gloves will be donned for collecting each sample. The total area of each sample wipe will be 100 cm². Dry wipes or filter paper wetted with deionized water should be used for metals, liquid residues, or for sampling on skin. The analytical lab will be contacted by the IH Consultant for more details on wipe sampling procedures.

4.0 LABORATORY ANALYTICAL METHODS

Table 3 presented below summarizes the laboratory methods for analyzing the vacuum/wipe dust samples and air samples collected by Aero-Environmental. The information contained in Table 3 is applicable to the laboratory analysis of both pre-cleaning and post-decontamination vacuum/wipe dust samples and air samples.

TABLE 3- LABORATORY METHOD DETECTION AND REPORTING LIMITS AND CONCENTRATIONS OF CONCERN

Method/Matrix	Parameter/Sample Type	Reporting Limit	Concentration of Concern
EPA 6010D/6020B	Cobalt/Vacuum Dust	0.5 µg/100 cm ²	2 µg/100 cm ²
EPA 6010D/6020B	Cobalt/Surface Wipes	0.5 µg/100 cm ²	2 µg/100 cm ²
NIOSH 7300/7303	Cobalt/Air Samples	1 µg/sample	0.020 mg/m ³

5.0 SAMPLE SCREENING STANDARDS AND ACTIONS INITIATED BY ELEVATED RESULTS

This section presents site-specific screening levels that will be used to evaluate the results of laboratory analysis of dust wipe/vacuum samples, as well as the results of air sampling. Specific screening levels have been established for pre-decontamination vacuum/wipe dust samples, air samples, and post-decontamination efficacy vacuum dust/wipe samples. The following sections present each of these screening standards, as well as actions that are triggered by results that exceed the relevant screening standard.

5.01 Pre-Decontamination Vacuum/Wipe Dust Samples Screening Levels

Results for pre-cleaning vacuum/wipe dust samples will be compared with site-specific screening levels for cobalt concentrations in the fine fraction of dust. The site-specific screening level focuses on the fine fraction of dust because past studies have demonstrated that the fine fraction consists of the size class of particles most likely to be inhaled or ingested. Past studies have also demonstrated correlation between decreases in particle size class and increased metal enrichment (EPA 2016b). The site-specific screening levels for cobalt concentrations in the fine fraction of dust are:

- Cobalt 2 µg/100 cm²



The site-specific cobalt screening level was established using the 2011 Brookhaven National Laboratory (BNL), Free Release recommended level of $2 \mu\text{g}/100 \text{ cm}^2$ for Surface Wipe Sampling Procedures, Table 3.

Validated analytical results from pre-cleaning vacuum dust samples will be compared with the screening levels described above, and exceedances will trigger response actions and decontamination to be conducted by Belfor Environmental.

5.02 Initial Sampling and Analysis

The existing analytical data indicated the presence of cobalt on selected equipment and building material surfaces within Unit B's interior. However, the data collected by SafeBridge Consultants in 2017 also appeared to indicate the possibility of cobalt cross-contamination on surfaces/flooring in the areas adjacent to the work areas such as office areas and common areas.

Aero-Environmental recommends conducting a preliminary site assessment walk-through of the facility with Belfor Environmental to delineate exactly those areas they are proposing to conduct decontamination activities, in order for Aero-Environmental to determine exactly those areas where data gaps exist and which require additional surface wipe sampling. These additional areas might include common walkways adjacent to the work areas, roof vent exhaust locations, maintenance/docking areas, fume hoods and fan housings, office and common areas.

Aero-Environmental will implement the sampling activities, once the SAP is approved. For budgeting purposes we have assumed that between 40-60 wipe/vacuum samples will be collected by a two-person crew in one day and submitted to ALS Environmental for cobalt analysis on a standard turn-around (TAT) of 1 week.

5.03 Reporting

Once all analytical results have been obtained, Aero-Environmental will prepare a Pre-Decontamination Sampling Report. The report will include a sketch showing the approximate sampling locations, sampling types, and a summary of sampling results, in a tabulated format. Copies of analytical laboratory reports will also be included.

5.04 Decontamination Plan

Once the initial sampling and analysis has been completed, Aero-Environmental will prepare a Decontamination Plan, which will incorporate elements of Belfor Environmental's Facility Decontamination and Scope of Work. This plan will also include a diagram showing approximate decontamination limits, which will be based on Belfor Environmental's Facility Decontamination and Scope of Work, as well as the pre-decontamination sampling and analysis results. This plan will also include decontamination methods, approximate locations and types of post-cleanup verification samples, and the clearance criteria goals, to be specified for the maximum allowable concentration ($2 \mu\text{g}/100 \text{ cm}^2$) on surfaces and indoor air.

6.0 DECONTAMINATION PROCEDURES

Dedicated sampling equipment and personal protective equipment (PPE) will be double-bagged and disposed of with all other used PPE waste produced at the site. Aero-Environmental anticipates that the sampling equipment will be dedicated to each sample and will be disposable. In the event that sampling equipment



requires decontamination, Aero-Environmental will decontaminate equipment in accordance with industry standards. Investigation-derived waste (IDW) including PPE, sampling equipment, and supplies, will be double-bagged and disposed of as dry industrial waste in accordance with the EPA Office of Emergency and Remedial Response (OERR), Management of Investigation-Derived Waste during Site Inspections (Document No. EPA/540/G-91/009 May 1991).

7.0 SAMPLE HANDLING AND LABORATORY PROCEDURES

The collected samples will be labeled, packaged, and shipped to the ALS Environmental Laboratory in Salt Lake City, Utah, in accordance with their lab procedures. The samples will be analyzed for cobalt. Based on these analytes, no special preservation (temperature control or other) is required for shipping. Table 3 provides laboratory specific method detection and reporting limits, as well as concentrations of concern. Vacuum/wipe dust samples will be analyzed in accordance with ASTM Methods D7144 and D5438 for micro-vacuum sampling. Wipe samples will be collected in accordance with the National Lead Poisoning Prevention Program which has documented procedures for wipes and sample collection (OSHA, 1999; ASTM, 2010; ASTM, 2011).

Samples will be identified by a unique sample identification number as described in Tables 1 and 2 listed below.

7.01 Sample Labels

Samples will be labeled in accordance with standard laboratory and industry recognized SOPs. Specifically, each dust filter holder, wipe sample, and air collection cassette and the evidence bag it is placed in will both be labeled with:

- Sample ID
- Time of Sample Collection

7.02 Sample Chain of Custody

Aero-Environmental will use standard sample chain of custody (COC) procedures to maintain and document sample integrity during collection, transportation, storage, and analysis in accordance with the standard laboratory quality control procedures. A sample will be considered in custody if one of the following statements applies:

- Sample is in a person's physical possession or view
- Sample is in a secure area with restricted access
- Sample is placed in a container and secured with an official seal such that the contents of the container cannot be reached without breaking the seal

The COCs generated by Aero-Environmental will contain the following information:

- Project name
- Sampling location (property ID)
- Name and signature of sampler
- Destination of samples (laboratory name)
- Sample ID number
- Date and time of collection
- Date shipped
- Sample matrix
- Number and type of containers filled



- Analysis requested
- Preservatives used (if applicable)
- Special instructions (for example, laboratory needs to sub-sample oversized material or perform additional homogenization)
- Signatures of individuals involved in custody transfer, including the date and time of transfer
- Airbill number (if applicable)
- Project contact and phone number

8.0 QUALITY ASSURANCE/QUALITY CONTROL REQUIREMENTS

Quality assurance/quality control (QA/QC) requirements will be adapted to project-specific conditions. Aero-Environmental's project manager, Jorge Vizcaino, will be responsible for ensuring that sample quality and integrity are maintained and that sample label and documentation procedures are in accordance with AIHA Analytical Procedures and this SAP. When the results are received, Aero-Environmental will review the laboratory data packages for completeness.

All QA activities will accord with the SAP for the Quantum Labs site. A copy of the SAP will be maintained by the field sampling team for immediate reference in resolving any QA issues that might arise during field activities. QA/QC procedures for each type of data collected at the site are outlined below.

8.01 Vacuum/Wipe Dust Sampling QA/QC

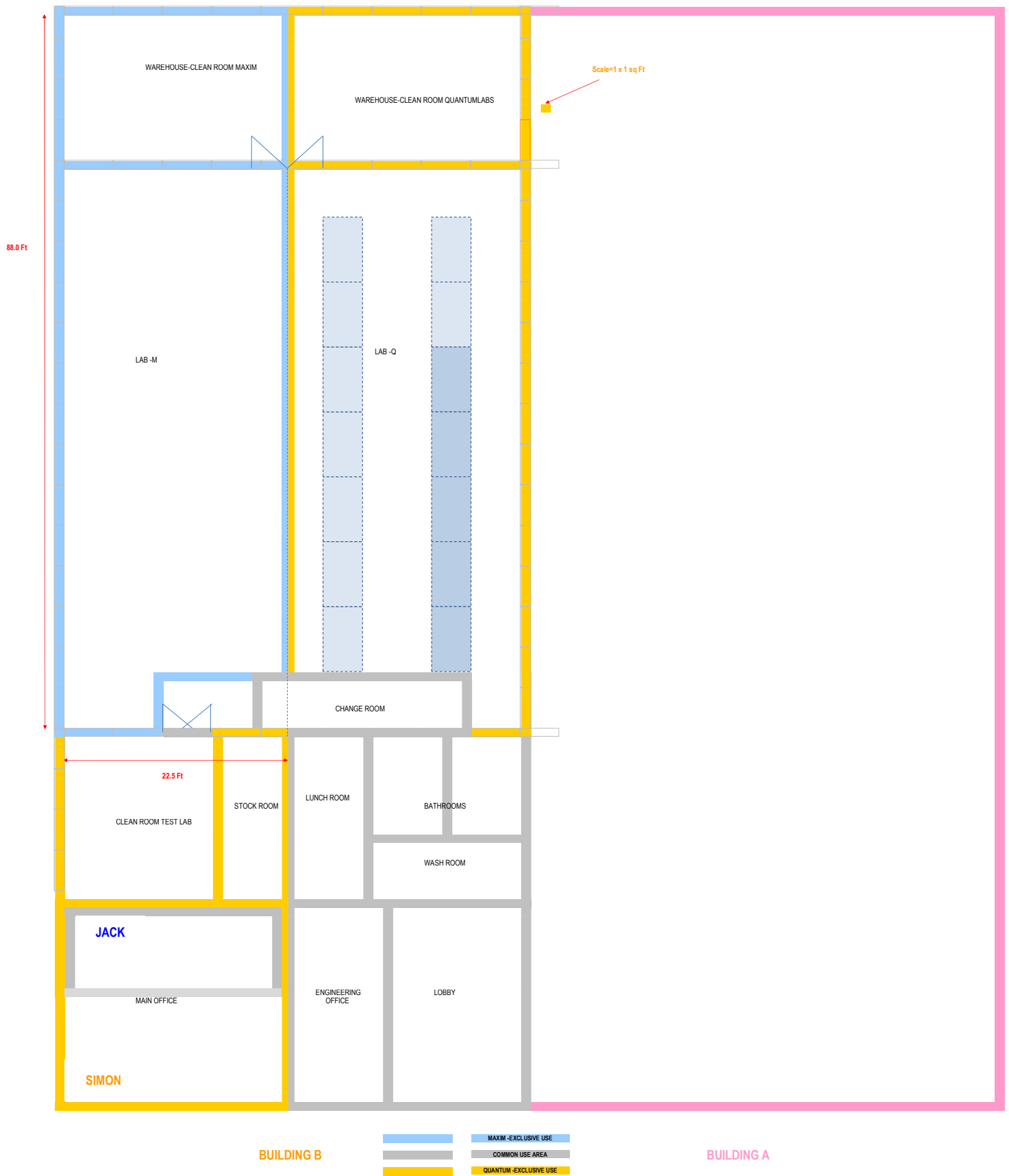
Vacuum/wipe dust samples are not subject to the standard QA/QC requirements applied for most other sampling methods (field duplicates and matrix spike/matrix spike duplicate) as a result both of the nature of vacuum dust sample collection and of the analytical methods used by the laboratory. Vacuum sampling is designed to assess the conditions of the specific area that is vacuumed. This factor makes collection of field duplicates difficult, since a true duplicate would need to be collected from the same sampling area as the original sample. Because collection of the original sample includes removal of dust from this area, it is not possible to collect a representative duplicate sample from the same sampling area. It is also not possible to split the original sample material into a sample and a field duplicate based on the nature of dust sampling results and laboratory analytical methods. Dust samples are used to quantify the total amount of dust in the sampling area as well as analytic loading levels, in addition to providing information on the concentration of contaminants in dust. As a result, the laboratory must process all sampling material as one sample to provide an accurate measurement of the amount of dust collected over the entire sampling area. If the sampling material was divided to allow for QA/QC analyses (field duplicates or matrix spike/matrix spike duplicate), it would be impossible to calculate loading levels for the sampling area.

8.02 Air Sampling QA/QC

For air samples quality control/quality assurance procedures will consist of submittal of 2 field blanks which will also be analyzed by an AIHA certified laboratory.



Figure 1
Facility Layout Plan





Appendix A

SafeBridge Consultants Report 2017 and ERM Report 2020

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November 24, 2020

Mr. Kevin Isaacson
 Ropers Majeski PC
 50 W. San Fernando Street, Suite 1300
 San Jose, California 95113

Subject: Scope of Work for Decontamination and Equipment Removal
 2108 Bering Drive, Unit B
 San Jose, California

Dear Mr. Isaacson:

Presented below is the proposed scope of work for decontamination of Unit B, and decontamination and removal of equipment owned by Maxim Integrated Products, Inc. (Maxim) from the 2108 Bering Drive, Unit B, San Jose, California (site). Ropers Majeski PC (RM) will retain ERM-West, Inc. (ERM), who will act as a General Contractor for this project.

SCOPE OF WORK

Task 1 – Planning and Coordination

ERM will subcontract American Integrated Services, Inc. (AIS), a California-licensed environmental remediation contractor, to provide specialty services associated with equipment and building materials decontamination and removal, and transportation/disposal of generated waste. In addition, ERM will subcontract Eurofins EMLab P&K (Eurofins), located in South San Francisco, to provide analytical laboratory services. ERM will provide full-time oversight of all fieldwork to be implemented by our subcontractors.

Prior to implementing fieldwork, ERM will prepare a site- and project-specific Health and Safety Plan (HASP) and Job Hazard Analysis for all work activities that may pose a safety hazard to employees or the general public. The HASP will guide safe implementation of the work.

This task also includes project setup, scheduling, and coordinating with RM for access to the work area(s) and other project-specific details. We have budgeted for up to four coordination calls with RM, each attended by two ERM personnel.

Task 2 – Pre-Construction Asbestos Survey

Survey

Prior to initiating any intrusive removal activities, ERM will conduct a limited asbestos survey targeting building materials that are scheduled for removal as part of this scope of work. Specifically, the asbestos survey will be limited to the following building components:

- Ventilation ducting associated with former equipment operations inside Unit B. Per observations conducted during our January 2020 site visit, there are three separate ventilation systems inside and immediately outside Unit B, all discharging to the building roof.

- Ventilation exhaust manifolds associated with the above-listed ventilation ducting, located on the building roof. Building roofing materials will be surveyed only to the extent they could be disturbed during removal of the exhaust manifolds, and subsequent capping of roof openings.
- Metal-framed Plexiglas® walls of Unit B.

In addition, readily accessible building materials comprising Unit B interior that may be disturbed during implementation of work outlined in this proposal will also be surveyed.

The survey will be conducted by a licensed California Asbestos Consultant, and will consist of visually observing the above-listed building components for potential presence of suspect asbestos-containing materials, and collecting samples of such materials, should they be identified. Collected samples (if any) will be submitted to Eurofins for total asbestos laboratory analysis using polarized light microscopy method. The samples will be analyzed on a standard turnaround time (TAT) of 5 business days.

Reporting

The limited asbestos survey results will be summarized in a letter report. At a minimum, the report will include a description of work conducted, listing of identified asbestos-containing materials (if any), and a copy of analytical laboratory report.

Task 3 – Prepare Sampling and Analysis Plan

The existing analytical data indicated the presence of cobalt on selected equipment and building material surfaces comprising Unit B's interior. The data also appeared to indicate the possibility of cobalt contamination on selected surfaces located immediately outside the unit.

ERM will prepare a draft Sampling and Analysis Plan (SAP) that will guide implementation of the sampling activities inside Unit B, at common walkways adjacent to the unit, back room where the shrink-wrapped equipment was staged, and roof vent exhaust locations. The SAP will include proposed sampling locations, sample types, sampling methods, and associated analytical methods that will be used to analyze the samples.

ERM will provide the draft SAP, in electronic format, to RM for review and comment. Following receipt of comments (if any) by RM, the SAP will be revised once (if needed), and finalized.

Note: At this time, we don't anticipate collecting any pre-decontamination samples from Maxim's equipment that is scheduled for removal. As such, the SAP will be limited to addressing building materials, and specifically exclude pre-decontamination equipment sampling.

Task 4 – Sampling and Analysis

Sampling and Analysis

ERM personnel will implement the sampling activities, per the approved SAP. For budgeting purposes we have assumed that up to 60 samples will be collected by a two-person crew in one day, and submitted to Eurofins for total cobalt analysis on a standard TAT of 5 working days.

Reporting

Following receipt of analytical results, ERM will prepare a Pre-Decontamination Sampling Report. At a minimum, the report will include a sketch showing approximate sampling locations, sampling types, and a summary of sampling results, in a tabulated format. The report will also include copies of analytical laboratory reports.

Task 5 – Prepare Decontamination Plan

Following completion of Task 4, ERM will prepare a Decontamination Plan. At a minimum, the plan will include a figure showing approximate decontamination limits, to be determined based on the pre-decontamination sampling and analysis results; recommendation for additional pre-decontamination sampling (if needed to address data gaps); decontamination methods; approximate locations and types of post-cleanup verification samples; and numerical decontamination goals, to be specified for the maximum concentration of cobalt on surfaces and in indoor air.

ERM will provide a draft Decontamination Plan, in electronic format, to RM for review and comment. Following receipt of comments (if any) by RM, the plan will be revised once (if needed), and finalized.

Task 6 – Remove Chemical Containers and Compressed Gas Cylinders

Prior to initiating work outlined in Tasks 6, 7, and 8 of this proposal, the ERM team will install a temporary plastic sheeting enclosure around “open” sides of the proposed project work area, where “hard” walls are not already present. The main purpose of the enclosure will be to minimize potential dispersion of airborne dust into other parts of the building and/or building exterior during implementation of the work. The enclosure will feature designated controlled access points at existing doorway locations. At this time, we anticipate that the enclosure will be installed around outer limits of the walkways surrounding Unit B, and will extend vertically from floor to ceiling (or as close as practicable to the ceiling, considering potential access limitations). The plastic sheeting will be removed following completion of Task 8.

Lab Packing

ERM will subcontract AIS to inventory, collect, characterize, segregate, and package (e.g., “lab pack”) all containerized chemicals remaining inside Unit B and in the back room, including chemicals inside the storage cabinets. AIS will transport the lab-packed chemicals for subsequent offsite disposal at a licensed disposal facility of ERM’s choice. For budgeting purposes, we have assumed that up to eight drums of “lab pack” chemicals will be generated and will require proper offsite disposal.

Compressed Gas Cylinders

Several compressed gas cylinders and associated piping, including methane, nitrogen, and boron trichloride piping, were observed inside and immediately outside of Unit B, near the framed Plexiglas wall. The ERM team will disconnect and remove compressed gas cylinders, and will attempt to return the cylinders to a compressed gas vendor. Alternatively, the compressed gas cylinders may need to be transferred to Maxim’s San Jose facility for further use or disposal, except as described below. Nitrogen will be used to purge methane and boron tetrachloride piping. For budgeting purposes, we have assumed there will be enough nitrogen in the cylinders to purge the piping.

Task 7 – Equipment Decontamination and Removal

Airborne Dust Monitoring

During implementation of work outlined in Tasks 7 and 8 of this proposal, ERM will conduct real-time monitoring of indoor air in the project area for airborne dust. The main objective of this activity will be to document airborne dust concentrations inside the project area during implementation of the work, and compliance with applicable Federal Occupational Safety and Health Administration (OSHA) and California OSHA (CalOSHA) regulations related to occupational workers exposure to airborne cobalt. Due to access limitations, air monitoring will be conducted only inside the work limits (i.e., no air monitoring will be conducted in other parts of the building), unless such monitoring is previously coordinated and agreed to between RM and the building owner.

Equipment Decontamination

The ERM team will establish equipment decontamination area(s) consisting of double layer of 6-mil plastic sheeting with elevated berms along the edges. The main purpose of the equipment decontamination areas will be to contain any liquids that may be generated during implementation of the equipment decontamination work, and prevent cleaning materials/solutions from contacting underlying floors. Due to limited space inside the project work area, and to promote efficient implementation of the work, more than one decontamination unit may need to be established. As directed, we have assumed that the equipment decontamination areas will be established inside Unit B's immediately adjacent walkway and/or the back room where the shrink-wrapped equipment is staged. The equipment decontamination areas will be removed following completion of work, as outlined in this task, and disposed of together with waste generated during the equipment cleanup.

Based on observations made during our January 2020 site visit, several pieces of equipment have already been disconnected, placed on pallets, and shrink-wrapped. Some of the shrink-wrapped equipment was moved from Unit B to the adjacent back room. However, some of the Maxim-owned equipment was still at their original locations inside Unit B, connected to ventilation ducting, electric power, and possibly to compressed gas piping.

Prior to moving the equipment, each piece of equipment will be observed for potential connections, unplugged from electric power (if plugged), and disconnected from ventilation ducting and other utilities, such as compressed gas piping. For budgeting purposes, we have assumed that equipment power cords were plugged into electric power receptacles, and not permanently connected to the electric grid, and no lockout/tagout (LOTO) will be required prior to unplugging the equipment from their respective electrical outlets. Should temporary disconnection of electric power be needed, either to disconnect Maxim's equipment or to accommodate Unit B decontamination, such disconnections/LOTO should be coordinated by RM with the building owner, and conducted by others.

Following disconnection, each piece of Maxim's equipment will be moved to a designated equipment cleanup area, and cleaned/decontaminated per the approved Decontamination Plan. Shrink-wrapped equipment will be unwrapped to enable cleaning. Prior to unwrapping, readily accessible shrink-wrap surfaces will be wet-wiped to minimize potential of dispersing accumulated dust (if any) during unwrapping. We have assumed that equipment cleaning will consist of wet-wiping readily accessible equipment surfaces with a low-volatile organic compounds (-VOC) SimpleGreen®, isopropyl alcohol, or similar solution that is effective in removal of metal residues to achieve a "visibly

clean” standard (i.e., no visible dust accumulations and/or “caked-in” grime on readily accessible equipment surfaces). To avoid potential damage to the equipment, the equipment will not be disassembled, and internal components will not be cleaned or otherwise decontaminated. Equipment cleaning will be deemed complete upon completion of one pass of cleaning, per the approved Decontamination Plan.

Post-Decontamination Equipment Sampling

Cleaned equipment will be allowed to dry and confirmatory wipe samples will be collected from cleaned equipment surfaces, per the approved Decontamination Plan. The samples will be submitted to Eurofins for subsequent cobalt analysis on a standard TAT of 5 business days. A summary of the post-decontamination sampling results will be included with the final report prepared under Task 10.

Each piece of equipment will be inventoried and photographed. The equipment will then be placed on pallets and shrink-wrapped in preparation for offsite transportation.

Equipment Removal

The ERM team will load the shrink-wrapped equipment onto a van-type, enclosed truck, and transport it to an offsite location to be specified by RM. Due to space limitations, we have assumed that a full-size, box trailer can be parked at the loading dock, and the equipment will be loaded as it is decontaminated. Once all equipment is loaded, it will be transported to its designated location. We have also assumed that the offsite equipment staging location will be located within 5 miles of the site. Should these assumptions be incorrect, additional budget may be needed to cover expenses.

Task 8 – Building Material Decontamination and Removal

Equipment Ventilation Systems

Per observations made during our January 2020 site visit, Unit B features three separate former equipment exhaust systems, all discharge to the building roof:

- Eight- to 12-inch metal duct main, which collected exhausts from various equipment located in the Yellow Room
- Six- to 8-inch metal duct, which collected exhaust from Temescal machine located in the Temescal Room
- Three- to 4-inch metal duct, which collected exhaust from various equipment located in the Metrology Room

Former equipment ventilation ducting and associated exhaust manifolds on the roof will be dismantled and removed. Ducts will be removed in sections, flattened, and wrapped for subsequent offsite disposal as assumed cobalt-containing waste. Associated ventilation manifolds on the building roof will also be removed. Duct portions that protrude the building roof and cannot be removed will be wet-wiped to remove any visible dust that might be present inside. Resulting roof openings will be capped with a 3/8-inch plywood covered with galvanized sheet metal caps (elevated exhaust risers) or roofing membrane (flat roof openings).

Metal-Framed Plexiglas Wall

Sections of the metal-framed Plexiglas wall(s) will be removed, as needed to accommodate removal of large equipment from inside Unit B. To the extent practicable, wall sections will be removed intact by disassembling sections, instead of cutting.

Note: Some wall/framing sections may need to be cut, as needed to complete the removal.

Removed wall and wall framing sections will be decontaminated and staged inside the designated work area for subsequent re-installation/handling by others. ERM will not re-install the removed Plexiglas wall sections.

Building Material Decontamination

Upon completion of the removal activities, interior hard surfaces (e.g., walls, floors, and other readily accessible surfaces) will be decontaminated per the approved Decontamination Plan. We have assumed that the decontamination will consist of wet-wiping readily accessible building material surfaces with a low-VOC SimpleGreen®, isopropyl alcohol, or similar solution effective in removal of metal residues once, to achieve a “visibly clean” standard (i.e., no visible dust accumulations and/or “caked-in” grime). No effort will be made to remove residual discoloration/staining.

For budgeting purposes, we have assumed that readily accessible surfaces comprising the following building areas will require decontamination:

- Unit B interior
- Removed sections of the Plexiglas wall
- Walkway immediately adjacent to the Plexiglas walls of Unit B
- Back room interior

The following are specifically excluded from this scope of work and will not be decontaminated or otherwise addressed:

- Suspended ceiling of Unit B
- Interior walls above suspended ceiling that cannot be readily accessed without use of extension tools or without removing the suspended ceiling
- High elevated areas to which access is hindered by overhead utilities (e.g., piping, conduits) or by building framing components
- Live electrical equipment

Note: For the cleaning to be effective, it should be conducted only after all equipment (including building owner's equipment) is removed from the unit, and all removal activities are complete.

Post-Decontamination Verification Sampling

Following completion of cleanup activities, ERM will conduct post-decontamination verification sampling in accordance with the approved Decontamination Plan. At this time, we have assumed that verification sampling will consist of collecting up to 90 wipe samples from decontaminated building surfaces for subsequent total cobalt analysis, and up to 10 pH field tests. The samples will be collected from the cleaned building material surfaces (e.g., walls, floors), and analyzed for total cobalt contents.

Because applicable OSHA and CalOSHA worker exposure standards are based on concentrations in ambient air (i.e., inhalation risk), ERM will also conduct post-cleanup indoor air sampling. Sampling will be conducted while simulating normal operating conditions inside the unit (i.e., with heating, ventilation, and air conditioning [HVAC] system and/or portable fans working), using low-flow air pumps and filters. Collected samples will be submitted to Eurofins for total cobalt analysis. For budgeting purposes, we have assumed up to 5 indoor air samples will be collected.

Task 9 – Waste Transportation and Disposal

ERM will be responsible for waste segregation, containerization, loading, handling, and transportation to a properly licensed waste disposal facility of ERM's choice. We have assumed that Maxim will act as a waste generator, and will sign all waste-related documents in a timely manner. For this proposal, we have assumed that the following waste streams will be generated and disposed of as follows:

- Containerized chemicals – as “lab pack” hazardous waste
- Removed ventilation ducting and associated exhaust manifolds – as assumed California hazardous waste due to assumed cobalt toxicity
- Decontamination waste, equipment decontamination area liners, plastic enclosure materials, disposable personal protection equipment – as assumed California hazardous waste due to assumed cobalt toxicity
- Various trash, non-hazardous waste – as non-hazardous waste
- Compressed gas cylinders – return to a compressed gas vendor or transfer to Maxim's San Jose facility

Task 10 – Final Reporting

Following completion of the removal and decontamination work outlined in this proposal, and receipt of analytical results, ERM will prepare a final report. At a minimum, the report will include the following:

- A summary of work conducted.
- A summary of post-decontamination verification sampling analytical results, in a tabulated format. Wipe sampling and pH field testing results will be compared to pre-established cleanup goals, to be specified in the approved Decontamination Plan; and air sampling results will be compared to applicable OSHA and CalOSHA standards.
- A summary of indoor air monitoring results.
- Figures/Sketches outlining approximate decontamination limits, and depicting approximate sample locations.
- Copies of laboratory analytical reports.
- An inventory of equipment removed from the building.
- A photo log documenting progress of work.
- Copies of waste disposal documentation.

ERM will provide a draft final report, in electronic format, to RM for review and comment. Following receipt of comments (if any) by RM, the report will be revised once (if needed), and finalized.

ASSUMPTIONS AND LIMITATIONS

For budgeting purposes, we have made the following assumptions and limitations, in addition to those specified elsewhere in this proposal:

- ERM will be provided unobstructed access to the site during normal business hours, Monday through Friday from 7:00 a.m. to 5:00 p.m. Should RM require weekend and/or after hours work, additional budget will be required to cover expenses.
- The scope of work is limited to the scope outlined in this proposal.
- Water and electric power will be available from onsite sources at no cost to ERM.
- Pricing is based on ERM being awarded the entire scope of work and two separate mobilizations:
 - One mobilization to conduct limited asbestos survey (Task 2) and pre-decontamination sampling (Task 4)
 - One mobilization to complete the decontamination and removal work outlined in Tasks 6 through 9.
- RM will be responsible for coordinating access to the work area with the building owner.
- Scope of work specifically excludes filing any demolition, renovation, and/or asbestos abatement regulatory notifications.
- Scope of asbestos survey is limited to the scope of work outlined in Task 2 of this proposal, and specifically excludes conducting a comprehensive asbestos survey for Unit B and/or the entire building and surveying Maxim's equipment that is scheduled for transfer to another location.
- We have assumed that no asbestos-containing materials will be identified either during the limited asbestos survey or during implementation of the removal work. Should such materials be identified, limited demolition/removal may need to be conducted by a licensed asbestos contractor, and additional budget will be needed to cover expenses.
- Up to 43 pieces of equipment listed on Equipment Inventory provided by RM will be decontaminated and transported offsite. A copy of the equipment inventory is included as Attachment 1 to this proposal. We have assumed that up to 86 post-decontamination verification samples (two samples per each piece of equipment) will be collected from the cleaned equipment and submitted to laboratory analysis for total cobalt.
- Payment to ERM will be based on conducting one pass of cleaning/decontamination work, and will not be contingent on achieving any target cleanliness goals, including those to be specified in the Decontamination Plan. Should additional rounds of decontamination work be needed (i.e., to achieve target cleanliness goals), additional budget may be needed to cover expenses.
- All equipment will be removed from the building via the existing loading dock located in the back room, where shrink-wrapped equipment is currently staged. Cleaned equipment will be loaded into a box trailer that will be parked at the loading dock, as the equipment cleaning progresses.
- This proposal specifically excludes cleaning, decontaminating, moving, or otherwise addressing any equipment owned by the building owner or other third party. We have assumed that such equipment will be removed from Unit B by others prior to initiating the decontamination and removal activities by ERM, to enable implementation of the decontamination work outlined in this proposal.
- We have assumed the HVAC system will not require disassembling and/or removal, and will remain intact.
- ERM does not guarantee or otherwise imply that roof opening caps will be leak-proofed or meet any roofing performance/durability standards. ERM is not a roofing contractor.

- ERM will not be liable for causing any damage to the Plexiglas walls, including damages caused during removal of wall section(s). The walls will not be repaired or re-installed.
- Removal or otherwise addressing the suspended ceiling of Unit B is specifically excluded from this scope of work.
- ERM will not be liable for any damages to Maxim's equipment, which may result from equipment decontamination, handling, rigging, movement, and/or offsite transportation. We don't know current operational status or equipment condition, and do not guarantee or otherwise imply that the equipment will function properly, or function at all, after transferring it to an offsite location.
- Pricing is based upon open shop/non-prevailing labor rates.
- Standby time due to reasons beyond ERM's control will be billed on a time-and-materials (T&M) basis, allowing a minimum 8-hour day and other costs, such as equipment rental and temporary services.
- Work outlined herein can be completed in Level D personal protective equipment. Respiratory protection will be available and used, if/as warranted.
- We have budgeted for 20 hours of regulatory oversight at a rate of \$191/hour, plus 10% markup. This rate is consistent with the 2020 oversight rate published by the Santa Clara County, Site Cleanup Program (SCP). SCP oversees the cleanup of properties contaminated by hazardous materials. California Health & Safety Code Sections 101480 through 101490 state that a Responsible Person may request local agency oversight of site assessment and remediation. The oversight activities typically include review of relevant planning documents, site assessment, remediation work plans, sampling, establishment of site cleanup criteria, oversight of remedial activities, and verification sampling. At this time we anticipate that regulatory involvement would start at the planning phase of the project (e.g., Task 1), by contacting the SCP to discuss the project. Should SCP concur with providing regulatory oversight, an initial application would be submitted, and a site-specific Remedial Action Agreement executed between SCP and the Responsible Person.

PROJECT TEAM

Mr. Anthony Parenteau will serve as the Partner-in-Charge and will lead the project. Mr. Parenteau has over 20 years of experience in remedial construction, remediation, tank closure, and industrial facility decommissioning, decontamination, and demolition.

Mr. Jerzy Cebula will serve as Project Manager and will be responsible for managing all aspects of the work, budget, and schedule. Mr. Cebula has over 20 years of experience in environmental consulting and project management.

Mr. James Leist III, CAC, will conduct limited asbestos survey, and prepare a survey report.

The field sampling and oversight will be implemented by a team of properly licensed and trained ERM personnel.

The decontamination, removal, and waste handling/transportation work will be conducted by properly trained AIS personnel. The AIS onsite crew will consist of four laborers/equipment operators and a superintendent. AIS is a full-service environmental services company specializing in remediation, construction, emergency response, and specialized transportation services.

ERM

November 24, 2020

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SCHEDULE

We are prepared to begin work immediately upon receiving a written authorization to proceed from RM.

Fieldwork associated with pre-construction asbestos survey and pre-decontamination sampling outlined in Tasks 2 and 4 can be completed in one day.

The decontamination and removal work outlined in Tasks 6 through 9 can be completed in six consecutive working days. Post-decontamination sampling can be completed in one additional day by two ERM personnel.

Draft Final Report will be prepared within 4 weeks from completion of the fieldwork and receipt of post-decontamination sampling laboratory analytical results.

The entire project, except the final reporting, can be completed in approximately three months. A tentative schedule was provided to RP under a separate cover.

BUDGET

Taking under consideration the assumptions and limitations presented herein, the ESTIMATED PROBABLE COST (EPC) for the work described in this proposal is \$171,311. A task-by-task breakdown is presented below.

Work Task	EPC
Task 1 – Planning and Coordination	\$7,725
Task 2 – Pre-Construction Asbestos Survey	\$4,003
Task 3 – Prepare Sampling and Analysis Plan	\$8,048
Task 4 – Sampling and Analysis	\$16,177
Task 5 – Prepare Decontamination Plan	\$11,907
Task 6 – Remove Chemical Containers and Compressed Gas Cylinders	\$8,918
Task 7 – Equipment Decontamination and Removal	\$41,273
Task 8 – Building Materials Decontamination and Removal	\$42,292
Task 9 – Waste Transportation and Disposal	\$12,087
Task 10 – Final Reporting	\$14,679
Regulatory Oversight (up to 20 hrs)	\$4,202
EPC Total:	\$171,311

The EPC is ERM's best estimate of the costs required to complete the project. Only those costs incurred will be charged, but they will not exceed the EPC without RM's prior approval. To avoid any misunderstanding, it should be emphasized that the EPC is a budget estimate based on ERM's present knowledge of the assignment and is believed to be sufficient to cover services herein described. The price quoted for this work is valid for a period of 30 days from the date of this offer.

CHANGES IN SCOPE

ERM believes the budget presented is sufficient to complete the specified scope of work. However, the scope, budget, and schedule of this assignment may change because of unexpected conditions, changes in assumptions, or the need to perform additional work. Should such situations arise, ERM will notify RM as soon as possible and prepare a revised scope, budget, and schedule (i.e., change order). ERM will proceed with the additional work upon prior written authorization from RM. ERM reserves the right to request a change order if the project schedule is extended due to reasons beyond our control, including, but not limited to, COVID-19-related reasons.

TERMS AND CONDITIONS

The work specified in this proposal shall be governed by ERM's General Terms and Conditions, a copy of which is included as Attachment 2. This project will be implemented on a T&M basis, using fee schedules included in Attachment 3. ERM's reimbursable expenses, and AIS's labor and equipment rates presented in Attachment 3 will incur 10 percent handling fee (and not 15 percent as specified in ERM Schedule of Standard Charges included in Attachment 3). Equipment owned by ERM will be charged using a standard field cost recovery fee. Associated project costs of 9.8 percent of ERM's labor fee will be applied.

To support project initiation/mobilization efforts, ERM will invoice 33 percent of the total EPC fee immediately upon authorization to proceed. After that, all work will be invoiced monthly.

To ensure the health and safety of our staff in these challenging times, ERM reserves our right, without liability, to postpone or reschedule our services and/or substitute personnel performing services, as necessary to accommodate regulatory requirements and the personal needs of our staff. This is in addition to the right that ERM gives to all our staff to stop work without liability in the event that they feel that their health and safety is at risk when working at the premises of our clients or others. Whenever reasonably practicable, we will notify you in advance of our decision, however, this may not be possible in the event of urgent need. We will use reasonable endeavours to minimize the extent of any delays and/or costs associated with any suspension or changes.

PROPOSAL ACCEPTANCE

If this proposal is acceptable, please indicate your agreement by having an authorized representative sign in the space provided below. Please return the executed copy of this letter to ERM. Upon receipt of the acceptance copy, we will commence the performance of services.

The proposal shall be firm for a period of thirty (30) days from the date of the proposal, after which ERM may withdraw or modify the proposal.

ERM

November 24, 2020

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Thank you for the opportunity to support you on this important matter. If you have any questions please contact Mr. Cebula at 760.705.0663 or via email at jerzy.cebula@erm.com.

Sincerely,



Anthony Parenteau
Partner

JC/AP/taa

Attachments as noted.



Jerzy Cebula, P.E.
Program Manager

ERM

November 24, 2020

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AUTHORIZATION

Agreed and Accepted

Proposal for Decontamination and Equipment Removal, 2108 Bering Drive, Unit B

San Jose, California

\$171,311 EPC

Approved by:


Michael J. Ioannou (Dec 2, 2020 08:31 PST)

(Signature)

Michael J. Ioannou

(Printed Name)

Partner

(Title)

December 3, 2020

(Date)

ATTACHMENT 1 – EQUIPMENT INVENTORY

Equipment Inventory

TOOL NAME	MFG	MODEL
SOLVENT SINK	WAFAB INTERNATIONAL	72" SST FRONT ACCESS WET BENCH (SOLVENT)
ACID SINK	WAFAB INTERNATIONAL	72" PVC-C FRONT ACCESS WET BENCH (ACID)
CHEM CAPTURE CABINET	WAFAB INTERNATIONAL	26.50" WPP CHEMICAL CAPTURE CABINET
SS TABLE		
SRD DUAL STACK	CLASS ONE EQUIPMENT	SEMITOOL 270S SR
WAFER SCRUBBER	ULTRA EQUIPMENT COMPANY	SCS124R
FREEZER	TRUE	T-23DT
CABINET A		
CABINET B		
LAB STORAGE		
VACUUM PUMP SKID (CUSTOM)		
TABLE		
MEGA LAMINATOR	MEGA	305
OVEN	YES	YES-5
VACUUM PUMP		
BLUE M OVEN	BLUE M ELECTRIC	CC-02--W-P-C
COAT DEVELOP TRACK	SVG	SVG86
KARL SUSS	KARL SUSS	116AA002
BAW GAS 01	GAS SONICS INT	9104
CHEMICAL CABINET	JUSTRITE	
TEMESCAL	TEMESCAL	TFC-3500
CYRO	CTI-CYROGENICS	9600
POWER SUPPLY	TEMESCAL	SIMBA 20
CONTROLLER	VEECO	MARK ii HO
PUMP	EBARA	
TEMP CONTROL	ANOVA	
TRION ETCHER	TRION TECH	SIRUS T2+
CHEM CABINET	JUSTRITE	
CHEM CABINET	JUSTRITE	
TENCOR P-11 PROFILER	TENCOR	P-11 (P12HA, PR201208364)
OMNIMAP RS75	TENCOR	OMNIMAP RS75
THIN FILM STRESS MEASUREMENT SYSTEM	TENCOR	FLX-2320 (226815)
CABINET		
CABINET		
WAFER STORAGE	MICRO MAGNETICS	SpinTherm-1000 Oven
VSM	MICRO SENSE	
VSM RACK		FCM-10
POLISHER	FASTLAP	FL-24VG (24FL230VG)
CHILLER	NESLAB	HX150
MICROSCOPE	BSI	NANOSPEC AFT 4000 VISIBLE (BSI)
MICROSCOPE	NIKON	OPTIPHOT 88
PROBER	RUCKER & KOLLS	680 A
Vacuum Pump		

ATTACHMENT 2 - GENERAL TERMS AND CONDITIONS

1. Definitions. In these General Terms and Conditions (the "Terms"), the following definitions apply:
 - 1.1 "Claims" means any and all liabilities, claims, suits, losses, damages, fines, penalties and costs, including reasonable attorney's fees and other legal fees and disbursements;
 - 1.2 "Client" means the party entering into the Contract with ERM, directly or through a representative;
 - 1.3 "Contract" means the Proposal and the Terms, as either may be modified or supplemented in writing in accordance with Sections 18.4 and 19;
 - 1.4 "ERM" means the ERM company providing Services;
 - 1.5 "Party" means ERM or Client, as indicated by the context;
 - 1.6 "Proposal" means the document(s) issued by ERM, that reference or are accompanied by these Terms, in which ERM describes and offers to perform Services for Client;
 - 1.7 "Services" means the work performed or to be performed by ERM pursuant to the Proposal, and includes all ERM work product; and
 - 1.8 "Site" means any site upon which or in relation to which Services may be performed.
2. Proposal. The Proposal is firm for 30 days from its date. Unless expressly stated otherwise in the Proposal, the fees, costs and schedules in the Proposal constitute ERM's estimated probable cost and time for Services. The estimated probable cost is not a guaranteed maximum or not-to-exceed price. ERM shall inform Client if it determines at any time that a material change to the nature, time or extent of Services is required or advisable. No material change will be made without Client's consent except pursuant to Section 3.
3. Force Majeure: Emergencies. ERM's price and schedule are subject to equitable adjustments for delays caused by Client's failure to provide any required approval or suitable Site access or by occurrences or circumstances beyond ERM's reasonable control, such as fires, floods, earthquakes, strikes, riots, war, terrorism, threat of terrorism, acts of God, acts or regulations of a governmental agency, emergency, security measure or other circumstances, including, without limitation, unusual weather conditions ("Force Majeure"). If ERM determines in its sole discretion, based on circumstances surrounding the Services, that the health or safety of its personnel or its subcontractors' personnel is or may be at risk in performing Services, such circumstances will constitute a Force Majeure, and ERM will have the right to take any measure it deems necessary to protect personnel at Client's expense. If it is impracticable for ERM to obtain authorization from Client in an emergency affecting the health or safety of persons, the environment, or property, ERM may, at its discretion, act to prevent threatened damage, injury or loss at Client's expense.
4. Labor Rates.
 - 4.1 For Services charged on a time-and-material or cost-reimbursable basis, labor, costs and expenses will be billed to Client as indicated in the Proposal or in schedules attached to the Terms. ERM labor rates apply to (i) full-time, part-time, temporary and seconded employees of ERM and its affiliates, (ii) temporary employees whose direct compensation is paid by a temporary staffing agency and (iii) staff consultants.
 - 4.2 Labor rates stated in the Proposal or in attached schedules are subject to periodic adjustment by ERM. If labor rates are not stated in the Proposal, ERM's standard labor rates at the time of Services apply.
 - 4.3 If Services covered by the Proposal are subject to taxes or fees (except income taxes), such costs will be charged to and reimbursed by Client. A handling and administrative charge will be added to all third-party expenses.
5. Invoices and Payment. Within 5 business days of Client's delivery to ERM of a signed acceptance of the Proposal, Client will pay the amount stated in the Proposal as ERM's initial retainer for fees and expenses. Except as otherwise specified in the Proposal, Client will pay each invoice within 30 days of its date. All fees quoted are exclusive of goods and services, sales, value added or similar taxes and any other taxes that are specific to the transactions or payments arising from the Services, which will be charged separately. Vendor and subcontractor costs will be invoiced at those parties' standard or negotiated rates, plus mark-ups as provided in the Proposal. Client will reimburse reasonable, documented expenses incurred by ERM in performance of the Services. Certain vendors and subcontractors offer ERM trade or volume discounts, rebates or other special pricing arrangements that may not be passed through to Client or reflected in invoices. Client must make all payments in United States or Canadian currency, as invoiced, by direct transfer to the ERM bank account identified in the invoice. Client is not entitled for any reason to make any deduction or withhold any sum by way of set-off from the amounts payable to ERM. Interest will be charged on unpaid balances beginning 30 days from the invoice date at the lesser of 1.5% per month or the maximum rate permissible under law. ERM will apply payments first to any accrued interest, then to unpaid balances. Upon 2 business days' notice, ERM may suspend Services without liability until all past due amounts, including accrued interest, have been paid in full. If ERM takes legal action to enforce payment and prevails, Client shall reimburse ERM for all collection and legal costs. Client shall pay ERM for Services rendered regardless of whether Services are intended in whole or in part to benefit a third party.
6. Termination. The Contract may be terminated for cause and ERM's performance of the Services stopped by written notice from either Party (i) upon breach by the other Party of a material obligation under the Contract, (ii) if the other Party goes into bankruptcy, is

liquidated or is otherwise unable to pay its debts as they become due or (iii) if the other Party resolves to appoint or has appointed for it an administrator, receiver or other similar officer for any part of the Party's business, property or assets. Any termination for cause will be effective only if the terminated Party is given (a) at least 10 calendar days' written notice of termination, (b) opportunity for consultation with the terminating Party before the termination date if breach is claimed, and (c) reasonable opportunity to cure the breach to the extent it can be cured. The foregoing notwithstanding, if Client fails to pay any invoice within 2 business days of its due date, ERM may terminate the Contract and stop performance of the Services immediately upon dispatch of notice to Client. Client may terminate the Contract for its convenience upon 2 business days' written notice to ERM, in which event Client shall pay all fees and expenses for Services accrued to the termination date and ERM's reasonable costs resulting from termination, including, without limitation, demobilization costs, as detailed in a final invoice. This section does not limit ERM's rights to seek recovery for Claims resulting from a breach by Client.

7. Insurance.

- 7.1 ERM shall maintain policies of insurance for the following types of coverage, each with a limit of liability of US\$1,000,000 (except for Workers' Compensation or equivalent coverage): Workers' Compensation or equivalent coverage as required under applicable statute; Employer's Liability; Comprehensive General Liability; Comprehensive Automobile Liability; Professional Errors and Omissions and Contractor's Pollution Liability. ERM shall include Client as additional insured under the Comprehensive General Liability, Comprehensive Automobile Liability and Contractor's Pollution Liability policies.
- 7.2 Upon written agreement of the Parties, ERM may procure and maintain additional insurance coverage or increased policy limits at Client's expense.

8. Indemnification.

- 8.1 ERM shall indemnify Client, its affiliates and their respective directors, officers and employees (individually, a "Client Indemnitee" and collectively, "Client Indemnitees") from and against Claims arising out of the Contract, to the extent Claims are caused by the negligence or willful misconduct of ERM. The foregoing does not include Client's attorney's fees or other legal fees based on breach of Section 9.1.
- 8.2 Client shall indemnify ERM, its affiliates and their respective directors, officers, employees and contractors (individually, an "ERM Indemnitee" and collectively, "ERM Indemnitees") from and against Claims arising out of the Contract, to the extent Claims are caused by the negligence or willful misconduct of Client.
- 8.3 No ERM Indemnitee will be liable to a Client Indemnitee or any third party for the creation, existence or release of any type of hazardous or toxic waste, material, chemical, compound or substance, or any other type of environmental hazard, contamination or pollution, whether latent or patent, or the violation of any law or regulation relating thereto, existing at a Site prior to commencement of the Services ("Pre-Existing Condition"), and Client shall indemnify and defend ERM Indemnitees from Claims sustained in connection with a Pre-Existing Condition except to the extent the Pre-Existing Condition is exacerbated by the negligence or willful misconduct of an ERM Indemnitee.

9. Standard of Care: Limitation of Liability.

- 9.1 ERM shall exercise the degree of care and skill ordinarily exercised under similar circumstances at the same time by experienced professionals performing substantially similar services at the same or similar locality as the Site. ERM MAKES NO REPRESENTATIONS, WARRANTIES OR CONDITIONS OTHER THAN THOSE EXPRESSLY SET FORTH HEREIN. ANY IMPLIED REPRESENTATIONS, WARRANTIES AND CONDITIONS ARE DISCLAIMED.
- 9.2 If Services include (i) estimating the cost or potential cost of remediation, (ii) estimating the cost of compliance, or (iii) assessing the type, concentration, nature or quantity of any substance, waste or condition at, on or in a Site or structure, ERM will prepare such estimate or assessment based upon the information provided by Client or a third party, ERM's experience and, in some instances, the application of a method for estimating or assessing conditions based on representative or random sampling or inspection. Due to the nature of such Services, including, without limitation, the potential for the estimate or assessment to be based on incomplete or inaccurate information or anomalous samples, ERM does not represent, warrant or guarantee the accuracy of any such estimate or assessment.
- 9.3 IN NO EVENT WILL A CLIENT INDEMNITEE BE LIABLE TO AN ERM INDEMNITEE OR AN ERM INDEMNITEE BE LIABLE TO A CLIENT INDEMNITEE, OR ANYONE CLAIMING BY, THROUGH OR UNDER A CLIENT INDEMNITEE OR ERM INDEMNITEE, INCLUDING, WITHOUT LIMITATION, INSURERS, FOR ANY LOST, DELAYED OR DIMINISHED PROFITS, REVENUES, BUSINESS OPPORTUNITIES OR PRODUCTION OR FOR ANY INCIDENTAL, COLLATERAL, SPECIAL, INDIRECT, PUNITIVE, EXEMPLARY, FINANCIAL, CONSEQUENTIAL OR ECONOMIC LOSSES OR DAMAGES OF ANY KIND OR NATURE WHATSOEVER, HOWEVER CAUSED, REGARDLESS OF WHETHER THE CLIENT INDEMNITEE OR ERM INDEMNITEE, AS APPLICABLE, KNEW OR SHOULD HAVE KNOWN OF THE POSSIBILITY OF SUCH LOSSES OR DAMAGES.
- 9.4 IN NO EVENT WILL AN ERM INDEMNITEE BE LIABLE TO A CLIENT INDEMNITEE OR ANYONE CLAIMING BY, THROUGH OR UNDER IT,

INCLUDING WITHOUT LIMITATION, INSURERS, FOR ANY AMOUNT IN EXCESS OF US\$250,000 IN THE AGGREGATE. TO THE MAXIMUM EXTENT PERMITTED BY LAW, ERM WILL HAVE NO LIABILITY IF CLIENT FAILS TO INITIATE LEGAL PROCEEDINGS WITHIN 12 MONTHS OF PERFORMANCE OF THE SERVICES. CLIENT RELEASES ERM INDEMNITEES FROM ANY DAMAGES SUSTAINED BY CLIENT IN EXCESS OF THE AMOUNT STATED IN THIS SECTION 9.4, AND, TO THE MAXIMUM EXTENT PERMITTED BY LAW, FROM ANY CLAIM THAT IS THE SUBJECT OF PROCEEDINGS NOT INITIATED WITHIN THE TIME FRAME STATED IN THIS SECTION 9.4.

- 9.5 The provisions of this Section 9 will (i) apply to the fullest extent allowed by law whether liability is claimed or found to be based in contract (including breach of warranty or contract), tort (including negligence or negligent misrepresentation), equity, strict liability or otherwise, and (ii) survive the completion of Services and the expiration, cancellation or termination of the Contract. The provisions of Sections 9.3 and 9.4 will be enforceable as a separate agreement if necessary.
- 9.6 Client acknowledges and agrees that the price for Services set forth in the Proposal, subject to adjustment pursuant to the Contract, has been negotiated in consideration of the Parties' agreement to limit certain of ERM's liabilities. Accordingly, Client acknowledges and agrees that the provisions of this Section 9 satisfy any requirement of reasonableness under any law applicable to the Contract and to any Claims relating to, or arising in connection with, the Contract.
10. Containment and Disposal. If any hazardous or toxic waste, material, chemical, compound or substance or any waste regulated by local, state, provincial or federal law, including, without limitation, any sampling materials such as drill cuttings and fluids or asbestos (the "Waste") are encountered by ERM or result from ERM's performance, ERM will appropriately containerize the Waste and either (i) leave the containerized Waste on Site for proper disposal by Client or (ii) using a manifest signed by Client as generator, assist with transportation of Waste to a location selected by Client for disposal. Client acknowledges that at no time does ERM assume authority over the transportation or disposal of, or title to, or the risk of loss associated with, the Waste. Client agrees to indemnify and defend ERM Indemnitees from any and all Claims (including, without limitation, any liability derived from any local, state, provincial or federal "Superfund" law) in any way related to ERM's assistance with the storage, transportation or disposal of the Waste, except to the extent such Claims result from ERM's gross negligence or willful misconduct.
11. Client Responsibilities.
- 11.1 Client must provide all reasonable assistance required by ERM in connection with Services, including, without limitation, any assistance specified in the Proposal. In particular, Client will provide ERM with the following, as applicable:
- Reasonable ingress to and egress from the Site for ERM and its subcontractors and their respective personnel, equipment and vehicles, including but not limited to obtaining any consents or easements and complying with their terms.
- Clean, secure and unobstructed space at the Site for ERM's and its subcontractors' equipment and vehicles.
- Specifications (including, without limitation, facility schematics, Site schematics, engineering drawings and plot plans) detailing the construction of underground and aboveground facilities located at the Site that pertain to ERM's scope of work or are necessary to enable ERM to perform the Services.
- Approval of each specific location for boring, drilling, excavation or other intrusive work and identification of concealed or underground utilities, structures, obstructions, obstacles or sensitive conditions before ERM commences work at the location. If Client does not identify the location of the concealed and underground items or approve each location of intrusive work, Client shall indemnify and defend ERM against any harm or injury arising out of or related to contact with such hazards.
- Client's selection of any hazardous waste transporter and disposal facility and Client's arrangements for execution of the waste generator portion of any bill of lading, waste manifest, waste profile and related documents.
- All information related to the Services or subject matter thereof in Client's possession, custody or control reasonably required by ERM.
- 11.2 ERM has the right to rely, without independent investigation or inquiry, on the accuracy and completeness of all information provided by, on behalf of, or at the request of Client or any governmental agency to ERM or any ERM subcontractor. Client agrees to review all Proposals, designs, schematics, drawings, specifications, reports and other deliverables prepared by ERM for the accuracy and completeness of factual information provided by or on behalf of Client for inclusion and to provide ERM with any further information within Client's possession that may affect the accuracy or completeness of Services.
- 11.3 Full payment for Services is a condition precedent to Client's rights in ERM work product. If Services involve electronic data files that are maintained by or for Client, Client is responsible for maintaining backup copies of such files.
- 11.4 Unless otherwise expressly agreed in writing by the parties, Client is responsible for Site security.

- 11.5 As to any dispute involving Client or the subject matter of the Services in which ERM is either not a named party or not at fault, Client shall pay ERM for any reasonable attorneys fees, other legal fees and expenses, and other costs incurred and the time of ERM's personnel spent in responding, defending or participating, including but not limited to all such costs and time of ERM or its personnel when called or subpoenaed for depositions, examinations, appearances or document production.
- 11.6 During the period of performance and for one year thereafter, Client will not target and then hire any ERM professional based on their performance of Services for Client. Without limiting any damages or other remedies, immediately upon any breach of the foregoing, Client will pay ERM an amount equal to 50% of the ERM professional's ending annual salary with ERM.
12. Use of Name. Client authorizes ERM to use Client's name and a general description of the Services and subject matter thereof as a reference for prospective clients and projects.
13. No Third Party Reliance. Except as provided in Section 18.1, the Contract does not, and is not intended to, grant to any person other than ERM and Client any benefit, right or remedy hereunder. Unless otherwise expressly agreed by ERM in writing, Client will not provide ERM's work product to any third party, and no third party will have the right to rely on the Services or ERM's work product. Services are performed solely for the purposes stated in the Proposal. Client's modification of Services, or use of Services for any other purpose, is at Client's sole risk. If a court determines, notwithstanding this Section 13, that a third party has the right to rely on Services, to the fullest extent allowable under applicable law, such reliance is subject to the limitations included in the Contract. Client agrees to indemnify, hold harmless and defend ERM Indemnitees against Claims resulting from a Client Indemnitee directly or indirectly providing ERM work product to a third party absent ERM's prior express written consent.
14. Intellectual Property. Client acknowledges and agrees that ERM shall retain ownership rights in all work product conceived, developed or made by ERM and its Affiliates in the performance of the Services. Upon payment in full for the Services, ERM agrees to grant to Client a non-exclusive, royalty-free license to use such work product for the purposes specified in or implied by the Proposal. Client acknowledges and agrees that ERM shall maintain all ownership rights in technical information, inventions, discoveries, improvements, and copyrightable material, made or conceived by ERM prior to its commencing performance of the Services or developed by ERM outside the scope of the Services.
15. Severability. Each provision of these Terms is distinct and severable from the others. If one or more provisions is or becomes invalid, unlawful or unenforceable in whole or in part, the validity, lawfulness and enforceability of the remaining provisions (and of the same provision to the extent enforceable) will not be impaired, and the Parties agree to substitute a provision as similar to the offending provision as possible without its being invalid, unlawful or unenforceable.
16. Governing Law; Forum. The Contract is governed by the substantive laws of the jurisdiction in which ERM is formed (the "Jurisdiction"). The Jurisdiction's courts have exclusive jurisdiction and venue over all disputes arising out of the Contract, and the Jurisdiction is deemed to be the place of performance for all obligations under the Contract. The Parties waive any objection to the Jurisdiction's courts on grounds of inconvenient forum or otherwise.
17. Interpretation. Words in the singular include the plural and vice versa. Section captions are for convenience only and do not affect the meaning or construction of the Terms. A reference to a specific item as included within a general category does not exclude items of a similar nature, unless expressly stated otherwise. If any provision of the Terms is inconsistent with the Proposal, the Terms prevail.
18. Miscellaneous.
- 18.1 Other Parties. If Client engages ERM to provide Services on behalf of or for the benefit of another party (a "Client Party"), Client represents and warrants to ERM, as a material inducement to enter the Contract, that it has the authority to bind the Client Party to the Contract and that Client's signature on, or acceptance of, the Proposal does bind the Client Party. The limitation of liability in Section 9.4 applies jointly, not severally, to Client Indemnitees, any Client Party and any third party as provided in Section 13. If ERM in its sole discretion agrees in writing to Client's request that ERM seek payment from the Client Party, Client will nevertheless retain primary responsibility for payment for Services.
- 18.2 Law Firms. If Client engages a law firm, or if a law firm or other representative signs the Proposal or other documents or otherwise instructs ERM to take or refrain from taking any action, ERM is entitled to assume that the law firm or other representative has authority to so instruct ERM. If the law firm or other representative may or will rely on Services, its rights will be limited to those granted to Client in the Contract.
- 18.3 Entire Agreement. Upon Client's acceptance of the Proposal, the Contract constitutes the entire understanding between the Parties and the full and final expression of such understanding, and supercedes all prior and contemporaneous agreements, representations or conditions, express or implied, oral or written.
- 18.4 Waiver; Amendment. A provision of the Contract may be waived, deleted or modified only by a document signed by the Parties stating their intent to modify the Contract.

- 18.5 Survival. Sections 5, 8, 9, 10, 11, 13, 14, 15, 16, 17 and 18 and all provisions of the Contract that by their nature would usually be construed to survive an expiration or termination shall survive the expiration or termination of the Contract.
- 18.6 Printed Forms. Client may use its forms and agreements to administer any agreement between ERM and Client, but such use is for convenience only, and any provision therein that conflicts with the Contract is void.
- 18.7 Notices. Notices hereunder will be given to the persons identified in the Proposal by any of the following: personal delivery; registered or certified mail, return receipt requested and postage prepaid; internationally recognized overnight courier, all fees prepaid; facsimile; or email.
- 18.8 Relationship of Parties. The Contract does not give either Party the authority to act as an agent or partner of the other Party, or to bind or commit the other Party to any obligations. Nothing contained in the Contract shall be construed as creating a partnership, joint venture, agency, trust or other association of any kind.
19. Additional Terms. Additional provisions governing ERM's performance of Services, if attached to these Terms by ERM, are made part of the Contract.
20. Language. I hereby confirm and agree that this Contract and all documents relating hereto be drafted in English. *Je confirme avoir accepté que la présente entente de même que tous les documents s'y rattachant soient rédigés en anglais.*

ATTACHMENT 3 – RATE SCHEDULES

Schedule of Standard Charges



Labor Category	Hourly Rate*
Principal Engineer, Geologist, and Scientist	\$250 - \$420
Program Director	\$230 - \$310
Senior Engineer, Geologist, and Scientist	\$190 - \$305
Project Engineer, Geologist, and Scientist	\$150 - \$230
Staff Engineer, Geologist, and Scientist	\$105 - \$150
Senior Technician	\$80 - \$125
Technician	\$80 - \$110
Project Coordinator	\$75 - \$105
Technical Directors/Technical Specialists will be charged out as required for the project	\$250 - \$400

*Effective January 1, 2020. Subject to annual adjustment

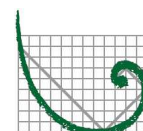
Subcontractors and other reimbursable expenses will be subject to a 15% handling fee.

Expert witness and litigation support provided at 150% of above rates.

Associated Project Costs (APC) are 9.8% of total labor costs per invoice and consist of those costs incurred in the performance of a specific client project for project-related communications, including:

- Wireless
- Facsimile, computer, and network usage
- Project accounting services
- Audio-visual equipment
- First-class postage, up to three overnight delivery packages per month (excluding boxes and courier services)
- Routine in-house reproduction of reports and other documents (up to 500 pages per copy job)

Not included in APC are itemizable time of administrative assistants, CAD and graphics professionals, and word processors; and shipping and reproduction costs in excess of the above-stated limits.





**Surface Concentrations of Cobalt Powder
On Various Facility Surfaces
Evaluated on October 23 and 25, 2017**

For:

**Quantum Labs
2108 Bering Drive
San Jose, CA 95131**

By:

Edward J. Haggerty, CIH
Manager, Industrial Hygiene Services
SafeBridge Consultants, Inc.
1924 Old Middlefield Way
Mountain View, CA 94043

November 21, 2017

Results for surface sampling conducted on October 23, 2017

The following provides a summary of samples with results above the Brookhaven National Laboratory (BNL) housekeeping limit of 30 µg/100 cm² on this date.

Central Corridor

- Two of five (2 of 5) samples of floor tile taken in the central corridor outside the evaporator room (Area 1) showed cobalt concentrations above the BNL housekeeping limit.
 - Samples: 1613 and 1614
 - Concentrations from 420 to 2,045 µg/100 cm²
 - **14 to 67 times the acceptable housekeeping limit**

Rooms Adjacent to the Evaporator Room (Area 1)

- One of two (1 of 2) floor tiles in the room to the left of the evaporator room showed a cobalt concentration above the limit.
 - Sample: 1625
 - Concentration at 161 µg/100 cm²
 - **5 times the acceptable limit**

Fume Hood (Area 2)

- Two of two (2 of 2) samples of floor tile at the fume hood showed cobalt concentrations above the BNL limit.
 - Samples: 1635 and 1638
 - Concentrations from 2,800 to 4,628 µg/100 cm²
 - **93 to 154 times the acceptable limit**
- Two of two (2 of 2) work surfaces (i.e., work table and fume hood threshold) in the area showed cobalt concentrations above the housekeeping limit.
 - Samples: 1636 and 1637
 - Concentrations from 7,800 to 14,000 µg/100 cm²
 - **260 to 467 times the acceptable limit**

Cleanroom - Lapping (Area 3)

- One of one (1 of 1): a single sample of floor tile obtained inside the area showed a cobalt concentration above the BNL limit.
 - Sample: 1639
 - Concentration was measured at 36 µg/100 cm²
 - **120% of the acceptable limit**
- Two of three (2 of 3) equipment surfaces in lapping also showed cobalt levels above the acceptable BNL housekeeping limit.
 - Samples: 1640 and 1643
 - Concentrations ranged from 59 to 120 µg/100 cm²
 - **200 to 400% of the acceptable limit**

Evaporator Room (Area 1)

- Four of five (4 of 5) samples of floor tile taken in the evaporator room showed cobalt concentrations above the BNL housekeeping limit of 30 µg/100 cm².
 - Samples: 1645, 1647, 1649, 1652
 - Concentrations from 334 to 1,001 µg/100 cm²
 - **11 to 33 times the limit**
- Four of four (4 of 4) work or equipment surfaces in the room also showed cobalt concentrations above the limit.
 - Samples: 1646, 1648, 1650, 1653
 - Concentrations from 180 to 4,900 µg/100 cm²
 - **6 to 163 times the limit**

Findings/Comments (1, 2 and 3 of 4)

1. Results demonstrate the presence of significant levels of cobalt contamination in identified processing environments as well as in adjoining space proximate to these areas.
2. Concentrations of cobalt on elevated items, i.e., top of the Temescal 350 and Plexiglas box near the small scale (Samples 1648 and 1650), provide evidence of an airborne transfer mechanism for dispersion of cobalt both inside and beyond the evaporator room (Area 1).
3. Detection of a measurable concentration of cobalt (16 µg/100 cm², Sample 1628) on top of the ClassOne unit, located in the room adjacent to (to the left of) Area 1, suggest airborne transfer or dispersion of cobalt in this space.

Results for surface sampling conducted on October 25, 2017

The item below provides a summary of samples with results above the BNL housekeeping limit on this date:

Evaporator Room (Area 1)

- Two of two (2 of 2) swabs of floor tile taken just inside the evaporator room, accessed from the common corridor, showed cobalt concentrations above the BNL housekeeping limit.
 - Samples: 1655 and 1657
 - Concentrations from 355 to 646 µg/100 cm²
 - **12 to 22 times the limit**

Shoe Covers

Analysis of shoe covers worn into each of the areas on the 25th showed cobalt contamination levels ranging from 14,000 to 33,000 µg per bootie.

Findings/Comments (4 of 4)

4. Results for shoe covers demonstrate the risk of mechanical transfer of cobalt contamination from process environments to surrounding areas by foot traffic.

Tables of Sampling Results

- Surface samples obtained on October 23
- Surface samples obtained on October 25
 - Shoe cover samples from October 25

Quantum Labs: Surface samples for cobalt (10/23/2017) - 170503-0625

Sample ID #	Amount of Cobalt (µg)	Area of Wipe (cm ²)	Area Surface Concentration (µg/100 cm ²)	BNL Housekeeping Limit (30 µg/100 cm ²)	Comparison to BNL Equip. Clean. Limit (2 µg/100 cm ²)	Description	Location
1613	3,900	929	420	Above	Above	1'x1' FT access hallway across from Evap. (left moving right)	Central corridor across from Evaporator Room (Area 1)
1614	19,000	929	2,045	Above	Above	1'x1' FT access hallway across from Evap. (left moving right)	Central corridor across from Evaporator Room (Area 1)
1615	160	929	17	OK	Above	1'x1' FT access hallway across from Evap. (left moving right)	Central corridor across from Evaporator Room (Area 1)
1616	<10	929	<1	OK	OK	1'x1' FT access hallway across from Evap. (left moving right)	Central corridor across from Evaporator Room (Area 1)
1617	41	929	4	OK	Above	1'x1' FT access hallway across from Evap. (left moving right)	Central corridor across from Evaporator Room (Area 1)
1618	<10	NA	NA	NA	Above	field blank	Central corridor across from Evaporator Room (Area 1)
1619	66	929	7	OK	Above	1'x1' FT right side of evap (door)	Room to right of Evaporator Room (Right of Area 1)
1620	<10	929	<1	OK	OK	1'x1' FT right side of evap (next to rear wall)	Room to right of Evaporator Room (Right of Area 1)
1621	21	929	2	OK	Above	1'x1' FT right side of evap (7' in front of door)	Room to right of Evaporator Room (Right of Area 1)
1622	<10	100	<10	OK	Above	4"x4" top of amber plexiglass storage cabinet/rack	Room to right of Evaporator Room (Right of Area 1)
1623	<10	100	<10	OK	Above	4"x4" transformer cabinet/rack	Room to right of Evaporator Room (Right of Area 1)
1624	<10	NA	NA	NA	Above	field blank	Room to right of Evaporator Room (Right of Area 1)
1625	1,500	929	161	Above	Above	1'x1' FT left side of evap (in front of door)	Room to left of Evaporator Room (Left of Area 1)
1626	59	929	6.4	OK	Above	1'x1' FT left side of evap (under oven)	Room to left of Evaporator Room (Left of Area 1)
1627	<10	100	<10	OK	Above	4"x4" top of plexiglas enclosure	Room to left of Evaporator Room (Left of Area 1)
1628	16	100	16	OK	Above	4"x4" top of ClassOne unit	Room to left of Evaporator Room (Left of Area 1)
1629	26	100	26	OK	Above	4"x4" right shelf of Canon	Room to left of Evaporator Room (Left of Area 1)
1630	<10	NA	NA	NA	Above	field blank	Room to left of Evaporator Room (Left of Area 1)
1631	380	929	41	Above	Above	1'x1' FT right of door into Cleanroom	Outside cleanroom - lapping (Area 3)
1632	64	929	7	OK	Above	1'x1' FT in front of flammables cabinet (right side of cleanroom)	Outside cleanroom - lapping (Area 3)
1633	110	929	12	OK	Above	1'x1' FT at gas rack, left of FH	Outside cleanroom - lapping (Area 3)
1634	<10	NA	NA	NA	Above	field blank	Outside cleanroom - lapping (Area 3)
1635	26,000	929	2,799	Above	Above	1'x1' FT in front of FH	At Fume Hood (Area 2)
1636	7,800	100	7,800	Above	Above	4"x4" left side of metal table at FH	At Fume Hood (Area 2)
1637	14,000	100	14,000	Above	Above	4"x4" front of FH	At Fume Hood (Area 2)
1638	43,000	929	4,628	Above	Above	1'x1' FT right side of FH	At Fume Hood (Area 2)
1639	330	929	36	Above	Above	1'x1' FT under PLC (Cleanroom)	Inside cleanroom (lapping) (Area 3)
1640	59	100	59	Above	Above	4"x4" horizontal surface under PLC (Cleanroom)	Inside cleanroom (lapping) (Area 3)
1641	<10	100	<10	OK	Above	4"x4" top of Plastic Haz Drum (Cleanroom)	Inside cleanroom (lapping) (Area 3)
1643	120	100	120	Above	Above	4"x4" s.s. horizontal surface under PLC (Cleanroom)	Inside cleanroom (lapping) (Area 3)
1644	<10	NA	NA	NA	Above	field blank	Inside cleanroom (lapping) (Area 3)
1645	6,200	929	667	Above	Above	1'x1' FT next to Sample 1647	Inside Evaporator Room (Area 1)
1646	1,800	100	1,800	Above	Above	4"x4" foil table right rear	Inside Evaporator Room (Area 1)
1647	3,100	929	334	Above	Above	1'x1' tacky mat in front of machine (evaporator)	Inside Evaporator Room (Area 1)
1648	180	100	180	Above	Above	4"x4" top right corner of Temescal 350	Inside Evaporator Room (Area 1)
1649	7,500	929	807	Above	Above	1'x1' FT in front of supersweep	Inside Evaporator Room (Area 1)
1650	420	100	420	Above	Above	4"x4" plexiglass box top near small scale	Inside Evaporator Room (Area 1)
1651	200	929	22	OK	Above	1'x1' FT rear right	Inside Evaporator Room (Area 1)
1652	9,300	929	1,001	Above	Above	1'x1' FT left of evaporator	Inside Evaporator Room (Area 1)
1653	4,900	100	4,900	Above	Above	4"x4" foil table @ fire extinguisher	Inside Evaporator Room (Area 1)

* <10 µg = Below the Limit of Detection/Quantification (< LOD/LOQ)

* All field blanks were found at non-detectable levels (<10 µg/wipe)

* NA = Not Applicable

Basis of interpretation of surface sampling results per Brookhaven National Laboratory (BNL) criteria available at:

https://www.bnl.gov/esh/shsd/sop/pdf/ih_sops/ih75190.pdf

Quantum Labs: Surface samples for cobalt (10/25/2017) - 170503-0625

Sample ID #	Amount Cobalt (µg)	Area of Wipe (cm ²)	Area Surface Concentration (µg/100 cm ²)	Comparison to BNL	Comparison to	Description	Location
				Housekeeping Limit (30 µg/100 cm ²)	BNL Equip. Clean. Limit (2 µg/100 cm ²)		
1655	3,300	929	355	Above	Above	1'x1' FT	FT just inside evaporator room from access hallway
1656	<10	NA	NA	NA	NA	field blank	Palintest dust wipe (blank)
1657	6,000	929	646	Above	Above	1'x1' FT	FT just inside evaporator room from access hallway
1666	2,700	NA	NA	NA	NA	Chair (seat, back, arm rests)	Palintest dust wipe of chair (area not measured)

Basis of interpretation of surface sampling results per Brookhaven National Laboratory (BNL) criteria available at:

https://www.bnl.gov/esh/shsd/sop/pdf/ih_sops/ih75190.pdf

Quantum Labs: Shoe cover ("bootie") samples for cobalt (10/25/2017) - 170503-0625

Sample ID #	Amount Cobalt (µg/shoe cover)	Description	Location
1658	<10	bootie (submitted in a tube)	field blank
1659	25,000	bootie (submitted in a tube)	Fume hood walk (left bootie)
1660	33,000	bootie (submitted in a tube)	Fume hood walk (right bootie)
1661	14,000	bootie (submitted in a tube)	Cleanroom (Area 3) left bootie
1663	23,000	bootie (submitted in a tube)	Evaporator Room (Area 1) left bootie
1665	21,000	bootie (submitted in a zip lock bag)	Evaporator Room (Area 1) right bootie

* <10 µg = Below the Limit of Detection/Quantification (< LOD/LOQ)

* Blank was found at a non-detectable level (<10 µg/shoe cover)

* NA = Not Applicable

MAXXAM lab results received on November 10, 2017

Laboratory Documents

Lab reports for surface samples and analysis of shoe covers
Chain-of-custody/Sample submission forms
Lab work order forms



November 01, 2017

Ed Haggerty
SAFE BRIDGE CONSULTANTS
1924 Old Middlefield Way
Mountain View, CA 94043

Maxxam Analytics Work Order 17101899

Reference: 170503-0625

Dear Ed Haggerty:

Maxxam Analytics received 40 samples on October 25, 2017 for the analyses presented in the following report.

Enclosed is a copy of the Chain-of-Custody record, acknowledging receipt of these samples. Please note that any unused portion of the samples will be discarded 30 days after the date of this report, unless you have requested otherwise.

This material is confidential and is intended solely for the person to whom it is addressed. If this is received in error, please contact the number provided below.

We appreciate the opportunity to assist you. If you have any questions concerning this report, please contact a Client Services Representative at (800) 806-5887.

Sincerely,

A handwritten signature in black ink, appearing to read "Daniel Elliott".

Daniel Elliott

Client Services Representative

Electronic signature authorized through password protection

Maxxam Analytics
22345 Roethel Drive
Novi, MI 48375

Toll Free: 800.806.5887
Lab Main: 248.344.2652
Fax: 248.344.2655
www.maxxamlabs.com

CASE NARRATIVE

Date: 01-Nov-17

CLIENT: SAFE BRIDGE CONSULTANTS

Project: 170503-0625

Work Order No 17101899

The results of this report relate only to the samples listed in the body of this report.

Unless otherwise noted below, the following statements apply: 1) all samples were received in acceptable condition, 2) all quality control results associated with this sample set were within acceptable limits and/or do not adversely affect the reported results, and 3) the industrial hygiene results have not been blank corrected.

ANALYTICAL RESULTS

Date: 01-Nov-17

Client: SAFE BRIDGE CONSULTANTS

Project: 170503-0625

Work Order No: 17101899

Client ID: 1613

Date Sampled: 10/23/2017

Lab ID: 001A

Date Received: 10/25/2017

Matrix: Wipe

Air Vol.(L): NA

Analyte	Concentration (µg)	Concentration (mg/m ³)	Reporting Limit (µg)	Test Method	Date Analyzed / Analyst
Cobalt	3,900	--	10	OSHA ID-125G	10/30/2017 DH

Client ID: 1614

Date Sampled: 10/23/2017

Lab ID: 002A

Date Received: 10/25/2017

Matrix: Wipe

Air Vol.(L): NA

Analyte	Concentration (µg)	Concentration (mg/m ³)	Reporting Limit (µg)	Test Method	Date Analyzed / Analyst
Cobalt	19,000	--	10	OSHA ID-125G	10/30/2017 DH

Client ID: 1615

Date Sampled: 10/23/2017

Lab ID: 003A

Date Received: 10/25/2017

Matrix: Wipe

Air Vol.(L): NA

Analyte	Concentration (µg)	Concentration (mg/m ³)	Reporting Limit (µg)	Test Method	Date Analyzed / Analyst
Cobalt	160	--	10	OSHA ID-125G	10/30/2017 DH

Client ID: 1616

Date Sampled: 10/23/2017

Lab ID: 004A

Date Received: 10/25/2017

Matrix: Wipe

Air Vol.(L): NA

Analyte	Concentration (µg)	Concentration (mg/m ³)	Reporting Limit (µg)	Test Method	Date Analyzed / Analyst
Cobalt	<10	--	10	OSHA ID-125G	10/30/2017 DH

General Notes:

<: Less than the indicated reporting limit (RL).

--: Information not available or not applicable.

ANALYTICAL RESULTS

Date: 01-Nov-17

Client: SAFE BRIDGE CONSULTANTS

Project: 170503-0625

Work Order No: 17101899

Client ID: 1617

Date Sampled: 10/23/2017

Lab ID: 005A

Date Received: 10/25/2017

Matrix: Wipe

Air Vol.(L): NA

Analyte	Concentration (µg)	Concentration (mg/m ³)	Reporting Limit (µg)	Test Method	Date Analyzed / Analyst
Cobalt	41	--	10	OSHA ID-125G	10/30/2017 DH

Client ID: 1618 BLANK

Date Sampled: 10/23/2017

Lab ID: 006A

Date Received: 10/25/2017

Matrix: Wipe

Air Vol.(L): NA

Analyte	Concentration (µg)	Concentration (mg/m ³)	Reporting Limit (µg)	Test Method	Date Analyzed / Analyst
Cobalt	<10	--	10	OSHA ID-125G	10/30/2017 DH

Client ID: 1619

Date Sampled: 10/23/2017

Lab ID: 007A

Date Received: 10/25/2017

Matrix: Wipe

Air Vol.(L): NA

Analyte	Concentration (µg)	Concentration (mg/m ³)	Reporting Limit (µg)	Test Method	Date Analyzed / Analyst
Cobalt	66	--	10	OSHA ID-125G	10/30/2017 DH

Client ID: 1620

Date Sampled: 10/23/2017

Lab ID: 008A

Date Received: 10/25/2017

Matrix: Wipe

Air Vol.(L): NA

Analyte	Concentration (µg)	Concentration (mg/m ³)	Reporting Limit (µg)	Test Method	Date Analyzed / Analyst
Cobalt	<10	--	10	OSHA ID-125G	10/30/2017 DH

General Notes:

<: Less than the indicated reporting limit (RL).

--: Information not available or not applicable.

ANALYTICAL RESULTS

Date: 01-Nov-17

Client: SAFE BRIDGE CONSULTANTS

Project: 170503-0625

Work Order No: 17101899

Client ID: 1621

Date Sampled: 10/23/2017

Lab ID: 009A

Date Received: 10/25/2017

Matrix: Wipe

Air Vol.(L): NA

Analyte	Concentration (µg)	Concentration (mg/m ³)	Reporting Limit (µg)	Test Method	Date Analyzed / Analyst
Cobalt	21	--	10	OSHA ID-125G	10/30/2017 DH

Client ID: 1622

Date Sampled: 10/23/2017

Lab ID: 010A

Date Received: 10/25/2017

Matrix: Wipe

Air Vol.(L): NA

Analyte	Concentration (µg)	Concentration (mg/m ³)	Reporting Limit (µg)	Test Method	Date Analyzed / Analyst
Cobalt	<10	--	10	OSHA ID-125G	10/30/2017 DH

Client ID: 1623

Date Sampled: 10/23/2017

Lab ID: 011A

Date Received: 10/25/2017

Matrix: Wipe

Air Vol.(L): NA

Analyte	Concentration (µg)	Concentration (mg/m ³)	Reporting Limit (µg)	Test Method	Date Analyzed / Analyst
Cobalt	<10	--	10	OSHA ID-125G	10/30/2017 DH

Client ID: 1624 BLANK

Date Sampled: 10/23/2017

Lab ID: 012A

Date Received: 10/25/2017

Matrix: Wipe

Air Vol.(L): NA

Analyte	Concentration (µg)	Concentration (mg/m ³)	Reporting Limit (µg)	Test Method	Date Analyzed / Analyst
Cobalt	<10	--	10	OSHA ID-125G	10/30/2017 DH

General Notes:

<: Less than the indicated reporting limit (RL).

--: Information not available or not applicable.

ANALYTICAL RESULTS

Date: 01-Nov-17

Client: SAFE BRIDGE CONSULTANTS

Project: 170503-0625

Work Order No: 17101899

Client ID: 1625

Date Sampled: 10/23/2017

Lab ID: 013A

Date Received: 10/25/2017

Matrix: Wipe

Air Vol.(L): NA

Analyte	Concentration (µg)	Concentration (mg/m ³)	Reporting Limit (µg)	Test Method	Date Analyzed / Analyst
Cobalt	1,500	--	10	OSHA ID-125G	10/30/2017 DH

Client ID: 1626

Date Sampled: 10/23/2017

Lab ID: 014A

Date Received: 10/25/2017

Matrix: Wipe

Air Vol.(L): NA

Analyte	Concentration (µg)	Concentration (mg/m ³)	Reporting Limit (µg)	Test Method	Date Analyzed / Analyst
Cobalt	59	--	10	OSHA ID-125G	10/30/2017 DH

Client ID: 1627

Date Sampled: 10/23/2017

Lab ID: 015A

Date Received: 10/25/2017

Matrix: Wipe

Air Vol.(L): NA

Analyte	Concentration (µg)	Concentration (mg/m ³)	Reporting Limit (µg)	Test Method	Date Analyzed / Analyst
Cobalt	<10	--	10	OSHA ID-125G	10/30/2017 DH

Client ID: 1628

Date Sampled: 10/23/2017

Lab ID: 016A

Date Received: 10/25/2017

Matrix: Wipe

Air Vol.(L): NA

Analyte	Concentration (µg)	Concentration (mg/m ³)	Reporting Limit (µg)	Test Method	Date Analyzed / Analyst
Cobalt	16	--	10	OSHA ID-125G	10/30/2017 DH

General Notes:

<: Less than the indicated reporting limit (RL).

--: Information not available or not applicable.

ANALYTICAL RESULTS

Date: 01-Nov-17

Client: SAFE BRIDGE CONSULTANTS

Project: 170503-0625

Work Order No: 17101899

Client ID: 1629

Date Sampled: 10/23/2017

Lab ID: 017A

Date Received: 10/25/2017

Matrix: Wipe

Air Vol.(L): NA

Analyte	Concentration (µg)	Concentration (mg/m ³)	Reporting Limit (µg)	Test Method	Date Analyzed / Analyst
Cobalt	26	--	10	OSHA ID-125G	10/30/2017 DH

Client ID: 1630 BLANK

Date Sampled: 10/23/2017

Lab ID: 018A

Date Received: 10/25/2017

Matrix: Wipe

Air Vol.(L): NA

Analyte	Concentration (µg)	Concentration (mg/m ³)	Reporting Limit (µg)	Test Method	Date Analyzed / Analyst
Cobalt	<10	--	10	OSHA ID-125G	10/30/2017 DH

Client ID: 1631

Date Sampled: 10/23/2017

Lab ID: 019A

Date Received: 10/25/2017

Matrix: Wipe

Air Vol.(L): NA

Analyte	Concentration (µg)	Concentration (mg/m ³)	Reporting Limit (µg)	Test Method	Date Analyzed / Analyst
Cobalt	380	--	10	OSHA ID-125G	10/30/2017 DH

Client ID: 1632

Date Sampled: 10/23/2017

Lab ID: 020A

Date Received: 10/25/2017

Matrix: Wipe

Air Vol.(L): NA

Analyte	Concentration (µg)	Concentration (mg/m ³)	Reporting Limit (µg)	Test Method	Date Analyzed / Analyst
Cobalt	64	--	10	OSHA ID-125G	10/30/2017 DH

General Notes:

<: Less than the indicated reporting limit (RL).

--: Information not available or not applicable.

ANALYTICAL RESULTS

Date: 01-Nov-17

Client: SAFE BRIDGE CONSULTANTS

Project: 170503-0625

Work Order No: 17101899

Client ID: 1633

Date Sampled: 10/23/2017

Lab ID: 021A

Date Received: 10/25/2017

Matrix: Wipe

Air Vol.(L): NA

Analyte	Concentration (µg)	(mg/m ³)	Reporting Limit (µg)	Test Method	Date Analyzed / Analyst
Cobalt	110	--	10	OSHA ID-125G	10/30/2017 DH

Client ID: 1634 BLANK

Date Sampled: 10/23/2017

Lab ID: 022A

Date Received: 10/25/2017

Matrix: Wipe

Air Vol.(L): NA

Analyte	Concentration (µg)	(mg/m ³)	Reporting Limit (µg)	Test Method	Date Analyzed / Analyst
Cobalt	<10	--	10	OSHA ID-125G	10/30/2017 DH

Client ID: 1635

Date Sampled: 10/23/2017

Lab ID: 023A

Date Received: 10/25/2017

Matrix: Wipe

Air Vol.(L): NA

Analyte	Concentration (µg)	(mg/m ³)	Reporting Limit (µg)	Test Method	Date Analyzed / Analyst
Cobalt	26,000	--	10	OSHA ID-125G	10/30/2017 DH

Client ID: 1636

Date Sampled: 10/23/2017

Lab ID: 024A

Date Received: 10/25/2017

Matrix: Wipe

Air Vol.(L): NA

Analyte	Concentration (µg)	(mg/m ³)	Reporting Limit (µg)	Test Method	Date Analyzed / Analyst
Cobalt	7,800	--	10	OSHA ID-125G	10/30/2017 DH

General Notes:

<: Less than the indicated reporting limit (RL).

--: Information not available or not applicable.

ANALYTICAL RESULTS

Date: 01-Nov-17

Client: SAFE BRIDGE CONSULTANTS

Project: 170503-0625

Work Order No: 17101899

Client ID: 1637

Date Sampled: 10/23/2017

Lab ID: 025A

Date Received: 10/25/2017

Matrix: Wipe

Air Vol.(L): NA

Analyte	Concentration (µg)	Concentration (mg/m ³)	Reporting Limit (µg)	Test Method	Date Analyzed / Analyst
Cobalt	14,000	--	10	OSHA ID-125G	10/30/2017 DH

Client ID: 1638

Date Sampled: 10/23/2017

Lab ID: 026A

Date Received: 10/25/2017

Matrix: Wipe

Air Vol.(L): NA

Analyte	Concentration (µg)	Concentration (mg/m ³)	Reporting Limit (µg)	Test Method	Date Analyzed / Analyst
Cobalt	43,000	--	10	OSHA ID-125G	10/30/2017 DH

Client ID: 1639

Date Sampled: 10/23/2017

Lab ID: 027A

Date Received: 10/25/2017

Matrix: Wipe

Air Vol.(L): NA

Analyte	Concentration (µg)	Concentration (mg/m ³)	Reporting Limit (µg)	Test Method	Date Analyzed / Analyst
Cobalt	330	--	10	OSHA ID-125G	10/30/2017 DH

Client ID: 1640

Date Sampled: 10/23/2017

Lab ID: 028A

Date Received: 10/25/2017

Matrix: Wipe

Air Vol.(L): NA

Analyte	Concentration (µg)	Concentration (mg/m ³)	Reporting Limit (µg)	Test Method	Date Analyzed / Analyst
Cobalt	59	--	10	OSHA ID-125G	10/30/2017 DH

General Notes:

<: Less than the indicated reporting limit (RL).

--: Information not available or not applicable.

ANALYTICAL RESULTS

Date: 01-Nov-17

Client: SAFE BRIDGE CONSULTANTS

Project: 170503-0625

Work Order No: 17101899

Client ID: 1641

Date Sampled: 10/23/2017

Lab ID: 029A

Date Received: 10/25/2017

Matrix: Wipe

Air Vol.(L): NA

Analyte	Concentration (µg)	Concentration (mg/m ³)	Reporting Limit (µg)	Test Method	Date Analyzed / Analyst
Cobalt	<10	--	10	OSHA ID-125G	10/30/2017 DH

Client ID: 1643

Date Sampled: 10/23/2017

Lab ID: 030A

Date Received: 10/25/2017

Matrix: Wipe

Air Vol.(L): NA

Analyte	Concentration (µg)	Concentration (mg/m ³)	Reporting Limit (µg)	Test Method	Date Analyzed / Analyst
Cobalt	120	--	10	OSHA ID-125G	10/30/2017 DH

Client ID: 1644 BLANK

Date Sampled: 10/23/2017

Lab ID: 031A

Date Received: 10/25/2017

Matrix: Wipe

Air Vol.(L): NA

Analyte	Concentration (µg)	Concentration (mg/m ³)	Reporting Limit (µg)	Test Method	Date Analyzed / Analyst
Cobalt	<10	--	10	OSHA ID-125G	10/30/2017 DH

Client ID: 1645

Date Sampled: 10/23/2017

Lab ID: 032A

Date Received: 10/25/2017

Matrix: Wipe

Air Vol.(L): NA

Analyte	Concentration (µg)	Concentration (mg/m ³)	Reporting Limit (µg)	Test Method	Date Analyzed / Analyst
Cobalt	6,200	--	10	OSHA ID-125G	10/30/2017 DH

General Notes:

<: Less than the indicated reporting limit (RL).

--: Information not available or not applicable.

ANALYTICAL RESULTS

Date: 01-Nov-17

Client: SAFE BRIDGE CONSULTANTS

Project: 170503-0625

Work Order No: 17101899

Client ID: 1646

Date Sampled: 10/23/2017

Lab ID: 033A

Date Received: 10/25/2017

Matrix: Wipe

Air Vol.(L): NA

Analyte	Concentration (µg)	Concentration (mg/m ³)	Reporting Limit (µg)	Test Method	Date Analyzed / Analyst
Cobalt	1,800	--	10	OSHA ID-125G	10/30/2017 DH

Client ID: 1647

Date Sampled: 10/23/2017

Lab ID: 034A

Date Received: 10/25/2017

Matrix: Wipe

Air Vol.(L): NA

Analyte	Concentration (µg)	Concentration (mg/m ³)	Reporting Limit (µg)	Test Method	Date Analyzed / Analyst
Cobalt	3,100	--	10	OSHA ID-125G	10/30/2017 DH

Client ID: 1648

Date Sampled: 10/23/2017

Lab ID: 035A

Date Received: 10/25/2017

Matrix: Wipe

Air Vol.(L): NA

Analyte	Concentration (µg)	Concentration (mg/m ³)	Reporting Limit (µg)	Test Method	Date Analyzed / Analyst
Cobalt	180	--	10	OSHA ID-125G	10/30/2017 DH

Client ID: 1649

Date Sampled: 10/23/2017

Lab ID: 036A

Date Received: 10/25/2017

Matrix: Wipe

Air Vol.(L): NA

Analyte	Concentration (µg)	Concentration (mg/m ³)	Reporting Limit (µg)	Test Method	Date Analyzed / Analyst
Cobalt	7,500	--	10	OSHA ID-125G	10/30/2017 DH

General Notes:

<: Less than the indicated reporting limit (RL).

--: Information not available or not applicable.

ANALYTICAL RESULTS

Date: 01-Nov-17

Client: SAFE BRIDGE CONSULTANTS

Project: 170503-0625

Work Order No: 17101899

Client ID: 1650

Date Sampled: 10/23/2017

Lab ID: 037A

Date Received: 10/25/2017

Matrix: Wipe

Air Vol.(L): NA

Analyte	Concentration (µg)	(mg/m ³)	Reporting Limit (µg)	Test Method	Date Analyzed / Analyst
Cobalt	420	--	10	OSHA ID-125G	10/30/2017 DH

Client ID: 1651

Date Sampled: 10/23/2017

Lab ID: 038A

Date Received: 10/25/2017

Matrix: Wipe

Air Vol.(L): NA

Analyte	Concentration (µg)	(mg/m ³)	Reporting Limit (µg)	Test Method	Date Analyzed / Analyst
Cobalt	200	--	10	OSHA ID-125G	10/30/2017 DH

Client ID: 1652

Date Sampled: 10/23/2017

Lab ID: 039A

Date Received: 10/25/2017

Matrix: Wipe

Air Vol.(L): NA

Analyte	Concentration (µg)	(mg/m ³)	Reporting Limit (µg)	Test Method	Date Analyzed / Analyst
Cobalt	9,300	--	10	OSHA ID-125G	10/30/2017 DH

Client ID: 1653

Date Sampled: 10/23/2017

Lab ID: 040A

Date Received: 10/25/2017

Matrix: Wipe

Air Vol.(L): NA

Analyte	Concentration (µg)	(mg/m ³)	Reporting Limit (µg)	Test Method	Date Analyzed / Analyst
Cobalt	4,900	--	10	OSHA ID-125G	10/30/2017 DH

Maxxam Analytics is accredited by the AIHA-LAP, LLC ELLAP program as laboratory number 100967. ELLAP meets the requirements of the National Lead Laboratory Accreditation Program (NLLAP), established under Title X of the Residential Lead-Based Paint Hazard Reduction Act of 1992 and includes paint, soil dust wipe analysis.

General Notes:

<: Less than the indicated reporting limit (RL).

--: Information not available or not applicable.

Work Order Sample Summary

Date: 02-Nov-17

CLIENT: SAFE BRIDGE CONSULTANTS

Project: 170503-0625

Work Order: 17101899

Date Received: 10/25/2017

Lab Sample ID	Client Sample ID	Tag Number	Collection Date
17101899-001A	1613		10/23/2017
17101899-002A	1614		10/23/2017
17101899-003A	1615		10/23/2017
17101899-004A	1616		10/23/2017
17101899-005A	1617		10/23/2017
17101899-006A	1618 BLANK		10/23/2017
17101899-007A	1619		10/23/2017
17101899-008A	1620		10/23/2017
17101899-009A	1621		10/23/2017
17101899-010A	1622		10/23/2017
17101899-011A	1623		10/23/2017
17101899-012A	1624 BLANK		10/23/2017
17101899-013A	1625		10/23/2017
17101899-014A	1626		10/23/2017
17101899-015A	1627		10/23/2017
17101899-016A	1628		10/23/2017
17101899-017A	1629		10/23/2017
17101899-018A	1630 BLANK		10/23/2017
17101899-019A	1631		10/23/2017
17101899-020A	1632		10/23/2017
17101899-021A	1633		10/23/2017
17101899-022A	1634 BLANK		10/23/2017
17101899-023A	1635		10/23/2017
17101899-024A	1636		10/23/2017
17101899-025A	1637		10/23/2017
17101899-026A	1638		10/23/2017
17101899-027A	1639		10/23/2017
17101899-028A	1640		10/23/2017
17101899-029A	1641		10/23/2017
17101899-030A	1643		10/23/2017
17101899-031A	1644 BLANK		10/23/2017
17101899-032A	1645		10/23/2017
17101899-033A	1646		10/23/2017
17101899-034A	1647		10/23/2017

Work Order Sample Summary

Date: 02-Nov-17

CLIENT: SAFE BRIDGE CONSULTANTS

Project: 170503-0625

Work Order: 17101899

Date Received: 10/25/2017

Lab Sample ID	Client Sample ID	Tag Number	Collection Date
17101899-035A	1648		10/23/2017
17101899-036A	1649		10/23/2017
17101899-037A	1650		10/23/2017
17101899-038A	1651		10/23/2017
17101899-039A	1652		10/23/2017
17101899-040A	1653		10/23/2017



November 01, 2017

Ed Haggerty
SAFE BRIDGE CONSULTANTS
1924 Old Middlefield Way
Mountain View, CA 94043

Maxxam Analytics Work Order 17101944

Reference: 170503-0625

Dear Ed Haggerty:

Maxxam Analytics received 4 samples on October 26, 2017 for the analyses presented in the following report.

Enclosed is a copy of the Chain-of-Custody record, acknowledging receipt of these samples. Please note that any unused portion of the samples will be discarded 30 days after the date of this report, unless you have requested otherwise.

This material is confidential and is intended solely for the person to whom it is addressed. If this is received in error, please contact the number provided below.

We appreciate the opportunity to assist you. If you have any questions concerning this report, please contact a Client Services Representative at (800) 806-5887.

Sincerely,

A handwritten signature in black ink that reads "Daniel Elliott". The signature is written in a cursive, flowing style.

Daniel Elliott

Client Services Representative

Electronic signature authorized through password protection

Maxxam Analytics
22345 Roethel Drive
Novi, MI 48375

Toll Free: 800.806.5887
Lab Main: 248.344.2652
Fax: 248.344.2655
www.maxxamlabs.com

CASE NARRATIVE

Date: 01-Nov-17

CLIENT: SAFE BRIDGE CONSULTANTS

Project: 170503-0625

Work Order No 17101944

The results of this report relate only to the samples listed in the body of this report.

Unless otherwise noted below, the following statements apply: 1) all samples were received in acceptable condition, 2) all quality control results associated with this sample set were within acceptable limits and/or do not adversely affect the reported results, and 3) the industrial hygiene results have not been blank corrected.

ANALYTICAL RESULTS

Date: 01-Nov-17

Client: SAFE BRIDGE CONSULTANTS

Project: 170503-0625

Work Order No: 17101944

Client ID: 1655 1x1FT

Date Sampled: 10/25/2017

Lab ID: 001A

Date Received: 10/26/2017

Matrix: Wipe

Air Vol.(L): NA

Analyte	Concentration (µg)	(mg/m ³)	Reporting Limit (µg)	Test Method	Date Analyzed / Analyst
Cobalt	3,300	--	10	OSHA ID-125G	10/30/2017 DH

Client ID: 1656 BLANK

Date Sampled: 10/25/2017

Lab ID: 002A

Date Received: 10/26/2017

Matrix: Wipe

Air Vol.(L): NA

Analyte	Concentration (µg)	(mg/m ³)	Reporting Limit (µg)	Test Method	Date Analyzed / Analyst
Cobalt	<10	--	10	OSHA ID-125G	10/30/2017 DH

Client ID: 1657 1X1 FT

Date Sampled: 10/25/2017

Lab ID: 003A

Date Received: 10/26/2017

Matrix: Wipe

Air Vol.(L): NA

Analyte	Concentration (µg)	(mg/m ³)	Reporting Limit (µg)	Test Method	Date Analyzed / Analyst
Cobalt	6,000	--	10	OSHA ID-125G	10/30/2017 DH

Client ID: 1666 CHAIR

Date Sampled: 10/25/2017

Lab ID: 004A

Date Received: 10/26/2017

Matrix: Wipe

Air Vol.(L): NA

Analyte	Concentration (µg)	(mg/m ³)	Reporting Limit (µg)	Test Method	Date Analyzed / Analyst
Cobalt	2,700	--	10	OSHA ID-125G	10/30/2017 DH

Maxxam Analytics is accredited by the AIHA-LAP, LLC ELLAP program as laboratory number 100967. ELLAP meets the requirements of the National Lead Laboratory Accreditation Program (NLLAP), established under Title X of the Residential Lead-Based Paint Hazard Reduction Act of 1992 and includes paint, soil, dust wipe analysis.

General Notes:

<: Less than the indicated reporting limit (RL).

--: Information not available or not applicable.

Work Order Sample Summary

Date: 02-Nov-17

CLIENT: SAFE BRIDGE CONSULTANTS

Project: 170503-0625

Work Order: 17101944

Date Received: 10/26/2017

Lab Sample ID	Client Sample ID	Tag Number	Collection Date
17101944-001A	1655 1x1FT		10/25/2017
17101944-002A	1656 BLANK		10/25/2017
17101944-003A	1657 1X1 FT		10/25/2017
17101944-004A	1666 CHAIR		10/25/2017

REQUEST FOR LABORATORY ANALYTICAL SERVICES

For Maxxam Analytics Use Only
Maxxam Analytics Lab Project No.

17101944

Maxxam Analytics

Detroit Lab
22345 Roethel Drive
Novi, MI 48375
(800) 806-5887
(248) 344-2652
FAX (248) 344-2655

Chicago Lab
95 Oakwood Road
Lake Zurich, IL 60047
(888) 576-7522
(847) 726-3320
FAX (847) 726-3323

Atlanta Lab
3360 Chastain Meadows Pk., Suite 300
Kennesaw, GA 30144
(800) 252-9919
(770) 499-7500
FAX (770) 499-7511

Maxxam
A Bureau Veritas Group Company

RUSH ANALYSIS

CONTACT LAB IN ADVANCE

Need Results by: / /
RUSH Charges Authorized? ☐ Yes ☐ No
(If yes, Initial here) _____
☐ Email Results to _____

Name <u>Elkington, J</u>		Client Job No. <u>70503-0625</u>
Company <u>Safe Bridge Construction</u>		PO # _____
Mailing Address <u>1924 Old Middlefield Way</u>		Name _____
City, State, Zip <u>Atlanta GA 30303</u>		Company _____
Telephone No. <u>404-961-4820</u>		Address _____
FAX No. _____		City, State, Zip _____

Special instructions and/or specific regulatory requirements:
(method, limit of detection, etc.)

P = Palintest Dust wipe

B = Bootie / Shoe cover

All samples except 1665 (bootie in bag) in vials

CLIENT SAMPLE IDENTIFICATION	DATE SAMPLED	MINUTES SAMPLED	MATRIX/MEDIA	AIR VOLUME (specify units)
1 ✓ 1655 1X1 FT	10/25/17		P	N/A
2 ✓ 1656 Blank			P	
3 ✓ 1657 1X1 FT			P	
4 ✓ 1658 Blank			B	
5 ✓ 1659 Left			B	
6 ✓ 1660 Right			B	
7 ✓ 1661 left			B	
8 ✓ 1663 left			B	
9 ✓ 1665 right			B	
10 ✓ 1666 chair			P	

ANALYSIS REQUESTED

(Enter an 'X' in the box below to indicate request. Enter a 'P' if Preservative added.)

ANALYSIS REQUESTED	FOR LAB USE ONLY
1 ✓ 1655 1X1 FT	
2 ✓ 1656 Blank	
3 ✓ 1657 1X1 FT	
4 ✓ 1658 Blank	
5 ✓ 1659 Left	
6 ✓ 1660 Right	
7 ✓ 1661 left	
8 ✓ 1663 left	
9 ✓ 1665 right	
10 ✓ 1666 chair	

Please combine with samples received on 10/24 if it makes sense to do so! EJA

Collector's Signature:

CHAIN OF CUSTODY	Collected by: <u>EJA</u>	(print)
	Relinquished by: <u>EJA</u>	Date/Time <u>10/25/17</u>
	Relinquished by:	Date/Time
	Method of Shipment: <u>Fed Ex</u>	
Authorized by: <u>EJA</u>	Date <u>10/25/17</u>	
	Received by: <u>EJA</u>	Date/Time <u>10/26/2017</u>
	Received at Lab by: <u>EJA</u>	Date/Time <u>10/26/2017</u>
	Sample Condition Upon Receipt: <input type="checkbox"/> Acceptable <input type="checkbox"/> Other (explain) <u>@ 10:10</u>	

(Client Signature MUST accompany Request)



November 10, 2017

Mr. Ed Haggerty
Safe Bridge Consultants
1924 Old Middlefield Way
Mountain View, CA 94043

Subject: Determination of Cobalt on Shoe Covers
Bureau Veritas Work Order No. 17102287

Dear Mr. Haggerty:

We are pleased to present our report on the determination of cobalt on used shoe covers. Six shoe covers were submitted to us on October 26, 2017.

The shoe covers were leached in a diluted solution of nitric acid for 24 hours. The leachate was analyzed for cobalt using inductively coupled argon plasma (ICP). Results are reported in the table below as mass of cobalt per shoe cover.

Sample Identification	Cobalt Concentration ($\mu\text{g}/\text{shoe cover}$)
1658 Blank	<10
1659 Left	25,000
1660 Right	33,000
1661 Left	14,000
1663 Left	23,000
1665 Right	21,000

It was a pleasure to be of assistance to you on this project. If you have any questions, please contact me at 248.344.3092 or susan.ferris@us.bureauveritas.com.

Sincerely,

A handwritten signature in cursive script that reads "Susan Ferris".

Susan Ferris
Investigative Analytical Services



Appendix B

Surface Contamination Clearance Levels

WTC, BNL and SEMI S12 Surface Contamination Clearance Levels

Substance	WTC Values		2011 BNL Values		2017 BNL Values		OTM "IH" method		SEMI S12 Values	
	Screening Value (µg/ft ²)	Screening Value (µg/100 cm ²)	Housekeep (µg/100 cm ²)	Free Release (µg/100 cm ²)	Housekeep (µg/100 cm ²)	Free Release (µg/100 cm ²)	TLV (ug/m ³)	Value (µg/100 cm ²)	Oral (µg/100 cm ²)	Dermal (µg/100 cm ²)
Aluminum	145,714	15,679	NA	NA	NA	NA	1000	10000	1666.7	11075.9
Antimony	58	6	NA	NA	NA	NA	500	5000	0.7	4.4
Arsenic	36	4	15	1	100	6.7	10	100	0.5	3.3
Barium	10,200	1,098	NA	NA	NA	NA	500	5000	116.7	775.3
Beryllium	291	31	3	0.2	3	0.2	0.05	0.5	3.3	22.2
Cadmium	145	16	3	0.2	50	3.3	10	100	1.7	11.1
Chromium	437	47	750 (Cr3) 7.5 (Cr6)	50 (Cr 3) 0.5 (Cr6)	50 (Cr6)	3.3 (Cr6)	500 (Cr) 5 (CrVI PEL)	5000 50	5.0	33.2
Cobalt	2,914	314	30	2	NA	NA	20	200	33.3	221.5
Copper	5,829	627	NA	NA	NA	NA	1000	10000	66.7	443.0
Iron	87,429	9,407	NA	NA	NA	NA	1000 (salt)	10	1000.0	6645.6
Lead	25	3	26.9	4.3	500	4.3	50	500	NA	NA
Manganese	2,914	314	300	20	NA	NA	100	1000	33.3	221.5
Mercury	15	2	NA	NA	NA	NA	100	1000	0.2	1.1
Nickel	2,914	314	1500	100	NA	NA	1500	15000	33.3	221.5
Selenium	729	78	NA	NA	NA	NA	200	2000	8.3	55.4
Silver	729	78	15	1	NA	NA	100	1000	8.3	55.4
Thallium	10	1	NA	NA	NA	NA	20	200	0.1	0.8
Vanadium	1,020	110	NA	NA	NA	NA	50 (VnO5)	500	11.7	77.5
Zinc	43,714	4,704	NA	NA	NA	NA	500 (R)	5000	500.0	3322.8
Other			NA	NA	NA	NA			0.0	0.0
PAHs (total)	13.5	1.45	NA	NA	NA	NA			NA	NA
PCBs (total)	1.5	0.16	NA	NA	NA	NA			NA	NA
Dioxins	0.00016	0.000017	NA	NA	NA	NA			NA	NA

WTC Indoor Environment Assessment: Selecting Contaminants of Potential Concern and Setting Health-Based Benchmarks (5/1/2003)

Table A-3. Settled Dust Screening Values and Supporting Toxicity Criteria (pg A-9)

Refer to Appendix D of document for derivation of screening values

http://www.epa.gov/wtc/reports/contaminants_of_concern_benchmark_study.pdf**2011 BNL Data from BNL IH75190 Surface Wipe Sampling Procedures, Table 3, 05/10/11**BNL surface formula (in ug/100 cm²) = 1.5 x TLV/PEL, based on ratio of DOE Be surface to Be PEL<http://www.bnl.gov/esh/shsd/sop/pdf/ihsops/ihs75190.pdf>**OSHA technical manual (OTM) "housekeeping" guideline based on OEL (PEL/TLV)**(8-hr TWA) = 0.01 mg/m³ (Arsenic TLV) Maximum "allowable" dose = 0.01 mg/m³ x 10 m³/day = is 0.1 mg/daySurface "housekeeping" standard = 0.1 mg/100 cm²[Section2, Chapter 2, II \(C\) – Risk Assessment and III \(A\) Wipe Sampling \(https://www.osha.gov/dts/osta/otm/otm_ii/otm_ii_2.html\)](https://www.osha.gov/dts/osta/otm/otm_ii/otm_ii_2.html)

Also adopted by Brookhaven National Lab 2017 IH75190 guidance

Prepared by:

James Kapin

jim.kapin@tetrattech.com

HBCL Method SEMI S12-0298 (1998) EH&S Guideline for Manufacturing Equipment Decontamination, R2-1, Method 1 (non carcinogen toxicity)

SEMI Health-Based Clean-up Level (oral)=(RfDxBW)/(SAoxMFxCExAFoXEF)

SEMI Health-Based Clean-up Level (dermal)=(RfDxBWxED)/(SAdxCExAFdxEF)

	Description	Notes	Units	Default
RFd	EPA reference dose	varies by substance	mg/kg-day	0.0003 Arsenic
BW	Body Weight	EPA Exposure Factors Handbook (1989)	kg	70
SAo	Surface Area, expsoed hands	EPA Exposure Factors Handbook (1989)	m2	0.084
MF	Fraction expossed area contacted by mouth	Risk assess asumption - conservative	aount/day	0.5
CE	Skin Contact Efficiency	Risk assess asumption	none	0.5
AFo	G-I absorption Factor	Risk assess asumption - conservative	none	1
EF	Exposure factor	12/24 hrs, 250/365 days, 40/70 yrs	none	0.2
ED	Exposure Duration	Risk assess assumption	none	0.5
SAd	Surface area, exposed hand, forearm, head	EPA Exposure Factors Handbook (1989)	m2	0.316
AFd	Dermal Absorption factor	Risk assess assumption - conservative	none	0.01

Health-Based Clean-up Level (oral)= $(RfD \times BW) / (SA_{ox} \times MF \times CE \times AF_{oXEF})$

10x Safety Factor

Arsenic**0.50** µg/100 cm²**0.05** µg/100 cm²**Health-Based Clean-up Level (dermal)=** $(RfD \times BW \times ED) / (SAd \times CE \times AF_{dxEF})$

10x Safety Factor

33.23 µg/100 cm²**3.32** µg/100 cm²



Appendix C

Professional Certifications

State of California
Division of Occupational Safety and Health
Certified Asbestos Consultant

Jorge Ignacio Vizcaino

Name



Certification No. 04-3554

Expires on 04/15/22

This certification was issued by the Division of Occupational Safety and Health as authorized by Sections 7160 et seq. of the Business and Professions Code.

The Board for Global EHS Credentialing (BGC)

through its vested authority, hereby confirms that

Jorge I. Vizcaino

has met all requirements of education, experience, and examination, and on-going maintenance set forth through the BGC's American Board of Industrial Hygiene®'s (ABIH®) credentialing division for re-certification in the Comprehensive Practice of Industrial Hygiene and is thereby conferred the credential of

Certified Industrial Hygienist® (CIH®)

The aforementioned individual is given all rights, privileges, and responsibilities as both a diplomate of the BGC and holder of the CIH credential, provided that the credential is not suspended or revoked, and it is renewed annually. Moreover, the holder must meet all recertification requirements, including the obligation to practice ethically as prescribed by the BGC.



Credential Number: 9814 CP

Award Date: October 4, 2010

Expiration Date: June 1, 2026

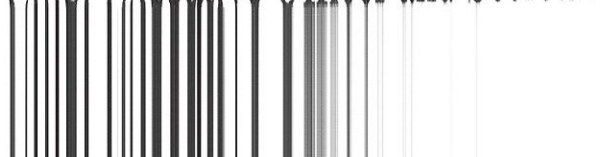
A handwritten signature in blue ink, reading "Cynthia Hanko", written over a horizontal line.

Cynthia Hanko, CIH
Chair of the Board of Directors



A handwritten signature in blue ink, reading "Ulric K. Chung", written over a horizontal line.

Ulric K. Chung, MCS, PhD
Chief Executive Officer and Secretary



From: recertinfo@ihmm.org
To: [Jorge Vizcaino](#)
Subject: Congratulations on Recertifying Your CHMM!
Date: Thursday, November 5, 2020 10:38:14 AM

Dear Vizcaino,

Congratulations on successfully recertifying your CHMM credential! Thank you for your continued effort in safety when working with hazardous materials. You are one of the many reasons why this world is a safer place to live. The amount of time you have taken to recertify has not gone unnoticed by the IHMM staff.

Your recertification application has been processed for the cycle ending 10/31/2021. Your new credential expiration date is 10/31/2026.

Please use this electronic copy of your **CHMM Letter of Compliance** as proof of credential and for any third-party verification needs until your presentation copies of your CHMM Letter of Compliance (proof of credential) and Certificate (suitable for display) arrive.

IHMM certifications are the standard of excellence in the hazardous materials industry. As an IHMM credential holder, you can:

- Validate your expertise in many areas
- Distinguish yourself in a competitive marketplace
- Increase your employment options
- Demonstrate ongoing competence
- Expand your professional network
- Benefit from public sector outreach
- Receive global recognition

You are now authorized to continue using your credential designation through the expiration date listed in your *MyIHMM* account online and on your certificate as long as you adhere to the CHMM Code of Ethics, remain in good standing, and maintain all required fees.

Remember to regularly access your *MyIHMM* account to monitor your certification and fee due dates, to maintain your record's accuracy and to keep abreast of certification news. As a Certificant you agree to the proper use of the logo and acronym designation, and to surrender the certificate in the event of withdrawal of certification by IHMM.

We appreciate your continued support of IHMM and your commitment to the professional excellence embodied in your credential.

Sincerely,



Gene Guilford
Executive Director



Institute of Hazardous Materials Management
9210 Corporate Blvd., Suite 470 | Rockville, MD 20850
(301) 984-8969 | (301) 984-1516 fax





STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC HEALTH



LEAD-RELATED CONSTRUCTION CERTIFICATE

INDIVIDUAL:



Jorge Vizcaino

CERTIFICATE TYPE:

Lead Inspector/Assessor

NUMBER:

LRC-00001930

EXPIRATION DATE:

11/3/2022

Disclaimer: This document alone should not be relied upon to confirm certification status. Compare the individual's photo and name to another valid form of government issued photo identification. Verify the individual's certification status by searching for Lead-Related Construction Professionals at www.cdph.ca.gov/programs/clppb or calling (800) 597-LEAD.



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Evaluation of Cobalt 59 Dust Exposures, Surface Contamination and Cobalt Decontamination Work Practices during interior Cobalt cleanup operations at Quantum Labs, San Jose, California

Date Inspection Conducted:	12/01/2021, 12/02/2021, and 12/04/2021
Date of Report:	12/10/2021
Assignment:	Decontamination Oversight, Air Monitoring, and Surface Contamination Evaluation during Cobalt Decontamination activities at Quantum Labs
Address of Evaluation	QUANTUM LABS- 2108 Bering Dr., Suite B, San Jose, CA
Work Performed By:	Jorge Vizcaino, CIH 9814
Aero-Environmental Project Name:	QUANTUM LABS-Cobalt Decontamination Monitoring

QUANTUM LABS
2108 BERING DR. UNIT B
SAN JOSE, CA 95131

Highlights of this Cobalt 59 Decontamination Oversight and Monitoring Evaluation

Evaluation of Cobalt 59 Dust Exposures, Surface Contamination, and Cobalt Decontamination Work Practices at Quantum Labs, San Jose, California.

On December 1st, 2nd, and 4th, 2021, Aero-Environmental Certified Industrial Hygienist (CIH 9814) Jorge Vizcaino, and Industrial Hygiene Technician David Kummer (LRC-00007343) conducted cobalt decontamination oversight and monitoring activities at Quantum Labs.

What Aero-Environmental Did

- We evaluated employee work practices.
- We collected personal and area air samples on two employees each day and two area (perimeter) air samples.



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- We collected baseline wipe samples of selected surfaces in the work areas as well as adjacent office/lab areas.
- We collected clearance wipe samples of the Warehouse Clean Room areas following decontamination of this area.
- We communicated with the Belfor Environmental project manager any issues of concern.

What We Found

- Analytical results for the baseline wipe samples indicated detectable cobalt surface concentrations in all of the samples collected, with two wipe samples exceeding the BNL "Free Release" Clearance Level of $2 \mu\text{g}/100 \text{ cm}^2$.
- Results from the perimeter area samples were all below the analytical detection limit and therefore did not indicate exposures to cobalt dust in excess of occupational criteria.
- Results from the personal air samples were both below the California Permissible Exposure Limit (PEL) of $0.02 \text{ mg}/\text{m}^3$.
- The cobalt decontamination work practices were adequate for this project, with the proper containment, critical barriers, HEPA vacuuming, wet methods, and proper waste disposal methods.
- All clearance wipe sample results were at or below the BNL "Free Release" level of $2 \mu\text{g}/100 \text{ cm}^2$ which is the maximum level allowed on accessible surfaces. Therefore this area can be set up by Belfor Environmental as their "Clean" Area or Support zone for decontamination purposes.

Abbreviations

cm^2	Square centimeter
$\mu\text{g}/100 \text{ cm}^2$	Micrograms per 100 square centimeters
mg/m^3	Milligrams per cubic meter
ABIH®	American Board of Industrial Hygienists
ACGIH®	American Conference of Governmental Industrial Hygienists
BNL	Brookhaven National Lab
CAL-OSHA	California Occupational Safety and Health Administration
CIH	Certified Industrial Hygienist
CFR	Code of Federal Regulations
CCR	California Code of Regulations
HEPA	High Efficiency Particulate Air
NIOSH	National Institute of Occupational Safety and Health



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PPE	Personal Protective Equipment
OEL	Occupational Exposure Level
PBZ	Personal Breathing Zone
ppb	Parts per billion
ppm	Parts per million
PEL	Permissible exposure limit
PPE	Personal Protective Equipment
TWA	Time-weighted average

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Summary

On December 1st, 2nd, and 4th 2021, Aero-Environmental Certified Industrial Hygienist (CIH 9814) Jorge Vizcaino, and Industrial Hygiene Technician David Kummer (LRC-00007343) conducted cobalt decontamination oversight and monitoring activities at Quantum Labs. Aero-Environmental conducted cobalt decontamination oversight and monitoring activities at Quantum Labs. Following an opening safety meeting and



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walkthrough of the decontamination areas, the industrial hygiene professionals evaluated the cobalt decontamination containment system and cobalt decontamination work practices that were going to be followed. During these two days of cobalt decontamination, air monitoring was conducted for personal and perimeter airborne cobalt dust. The cobalt decontamination containment and work practices were also evaluated and found to be satisfactory. In addition, cobalt decontamination activities and work practices were discussed with the project lead supervisor, Greg Henke.

Two perimeter (area) air samples for cobalt dust and two personal air samples were collected. The location of the perimeter samples included the negative air exhaust and the Clean Room Test Lab, adjacent to Simon Planck's office. Personal sampling was conducted on 2 employees each day for their entire work shift.

In addition, a total of six (6) surface wipe samples were collected during this initial assessment to determine a baseline level of cobalt dust concentrations inside and outside the work areas. Two of these wipe samples exceeded the BNL "Free Release" Clearance Level of $2 \mu\text{g}/100 \text{ cm}^2$.

Air sampling results indicated that exposures to cobalt dust were all below the California Permissible Exposure Limit (PEL) of $0.02 \text{ mg}/\text{m}^3$.

All clearance wipe sample results for the warehouse/clean room were at or below the BNL "Free Release" level of $2 \text{ ug}/100 \text{ cm}^2$ which is the maximum level allowed on accessible surfaces.

Introduction

In October, 2021, Aero-Environmental received request from Quantum Labs to conduct cobalt decontamination oversight and monitoring activities at Quantum Labs in San Jose, California. The request was made to ensure that the appropriate cobalt decontamination work practices were being followed, and therefore not potentially exposing workers and personnel in this industrial building or adjacent offices to Cobalt 59 dust.

On December 1st, 2nd, and 4th 2021, Aero-Environmental Certified Industrial Hygienist (CIH 9814) Jorge Vizcaino, and Industrial Hygiene Technician David Kummer (LRC-00007343) conducted cobalt decontamination oversight and monitoring activities at Quantum Labs. Following an opening safety meeting and walkthrough of the decontamination areas, the industrial hygiene professionals evaluated the cobalt



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decontamination containment system and decontamination work practices that were going to be followed. During these two days of cobalt abatement, air monitoring was conducted for personal and perimeter airborne cobalt dust. In addition, surface wipe samples were also collected of selected surfaces inside and outside the work areas.

Methods

Belfor Environmental Scope of Work consists of the following:

- Set up critical barriers and containments to isolate work areas.
- Lab pack of loose chemicals.
- Removal of Select Exhaust Systems
- Removal of specified tools owned by Maxim.
- Removal of specified pipe runs
- Decontamination of Quantum tools
- Clean Facility of Cobalt 59 contamination.

Aero-Environmental Consulting conducted the following activities:

- 1) Collection of personal and area air samples on two employees each day and two area (perimeter) air samples.
- 2) Evaluation of cobalt abatement work practices and issued comments and recommendations.
- 3) Collection of baseline surface wipe samples during the 1st day of decontamination activities.
- 4) Collection of clearance wipe samples in the Warehouse/Clean Room Area following decontamination.

TABLE 1-AIR/SURFACE SAMPLING METHODS		
Substance	Reason for Sampling	Sampling Methods
Airborne Cobalt Dust	Possible Exposure during cobalt decontamination activities	NIOSH Method 7300
Surface Cobalt Dust	Possible Exposure during cobalt decontamination activities	NIOSH Method 9102



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Evaluation Criteria

As a guide to the evaluation of the hazards posed by workplace exposures, Aero-Environmental field staff employs environmental evaluation criteria for the assessment of a number of chemical and physical agents. These criteria are intended to suggest levels of exposure to which most workers may be exposed up to 8 hours per day, 40 hours per week for a working lifetime without experiencing adverse health effects. It is, however, important to note that not all workers will be protected from adverse health effects even though their exposures are maintained below these levels. A small percentage may experience adverse health effects because of individual susceptibility, a pre-existing medical condition, and/or hypersensitivity (allergy). In addition, some hazardous substances may act in combination with other workplace exposures, the general environment, or with medications or personal habits of the worker to produce health effects even if the occupational exposures are controlled at the level set by the criterion. These combined effects are often not considered in the evaluation criteria. Also, some substances are absorbed by direct contact with the skin and mucous membranes, and thus potentially increase the overall exposure. Finally, evaluation criteria may change over the years as new information on the toxic effects of an agent become available.

The primary sources of environmental evaluation criteria for the workplace are: (1) NIOSH Recommended Exposure Limits (RELs), (2) the American Conference of Governmental Industrial Hygienists' (ACGIH®) Threshold Limit Values (TLVs®) and (3) the Division of Industrial Relations, California Occupational Safety and Health Administration (Cal/OSHA) Permissible Exposure Limits (PELs). Employers are encouraged to follow the NIOSH RELs, the ACGIH TLVs, or the Cal/OSHA PELs, whichever are the more protective criteria.

Cal/OSHA requires an employer to furnish employees a place of employment that is free from recognized hazards that are causing or are likely to cause death or serious physical harm. Thus, employers should understand that not all hazardous chemicals have specific Cal/OSHA exposure limits such as PELs and short-term exposure limits (STELs). An employer is still required by Cal/OSHA to protect their employees from hazards, even in the absence of a specific OSHA PEL.

A time-weighted average (TWA) exposure refers to the average airborne concentration of a substance during a normal 8- to 10-hour workday. Some substances have recommended STEL or ceiling values which are intended to supplement the TWA where there are recognized toxic effects from higher exposures over the short-term.



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Results

Results from the perimeter area samples were all below the analytical detection limit and therefore did not indicate exposures to cobalt dust in excess of occupational criteria.

Results from the personal air samples were both below the California Permissible Exposure Limit (PEL) of 0.02 mg/m³.

Analytical results for the baseline wipe samples indicated detectable cobalt surface concentrations in all of the samples collected, with two wipe samples exceeding the BNL "Free Release" Clearance Level of 2 µg/100 cm².

All clearance wipe sample results for the warehouse/clean room were at or below the BNL "Free Release" level of 2 ug/100 cm² which is the maximum level allowed on accessible surfaces.

The cobalt decontamination work practices were adequate for this project, with the proper containment, critical barriers, HEPA vacuuming, wet methods, and proper waste disposal methods.

TABLE 2-Summary of full-shift air sample results for airborne Cobalt and Surface Wipe Sample Results

Sample #/Date	Personal/Area	Concentration
12121W1-Dec 1	Warehouse Floor	0.77 µg/100cm ²
12121W2-Dec 1	Warehouse Hood Bench	2.8 µg/100cm ²
12121W3-Dec 1	Warehouse Floor	0.27 µg/100cm ²
12121W4-Dec 1	Clean Room Test Lab Floor	0.13 µg/100cm ²
12121W5-Dec 1	Bookshelf-Simon's Office	3.2 µg/100cm ²
12121W6-Dec 1	Stock Room	0.15 µg/100cm ²
365-04-Nov 22	Personal-Francisco Torres	<5.2 µg/m ³
12121A1-Dec 1	Personal-Aaron Davis	0.0016 mg/m ³
12121A2-Dec 1	Personal-Nestor Escobar	0.00018 mg/m ³
12121A3-Dec 1	Area-Negative Air	<0.00031 mg/m ³



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	Exhaust	
12121A4-Dec 1	Area-Clean Room Test Lab	<0.000057 mg/m ³
1221-A1-Dec 2	Perimeter-Negative Air Exhaust	<0.34 mg/m ³
1221-A2-Dec 2	Perimeter-Office	<0.37 mg/m ³
12221 A3-Dec 2	Personal-Mario Garza	<0.45 mg/m ³
12221 A4-Dec 2	Personal-Kristen Davis	<0.48 mg/m ³
12121FB-Dec 1	Field Blank	NA
12-4-W1-Dec 4	Warehouse Floor	0.52 µg/100cm ²
12-4-W2-Dec 4	Warehouse Floor	0.25 µg/100cm ²
12-4-W3-Dec 4	Warehouse Floor	<0.075 µg/100cm ²
12-4-W4-Dec 4	Horizontal Equipment Surface	0.94 µg/100cm ²
12-4-W5-Dec 4	Horizontal Hood Bench Surface	1.2 µg/100cm ²
12-4-W6-Dec 4	Horizontal Equipment Surface	0.10 µg/100cm ²
12-4-W7-Dec 4	Equipment Storage Barrel Lid	2.0 µg/100cm ²
12-4-W8-Dec 4	Vertical Door Frame	0.17 µg/100cm ²
12-4-W9-Dec 4	Equipment Cabinet Roof	0.42 µg/100cm ²
12-4-W10-Dec 4	Equipment Cabinet Roof	0.53 µg/100cm ²
12-4-FB-Dec 4	Field Blank	NA

Conclusions and Recommendations

This cobalt dust evaluation indicated that all air sampling results for airborne cobalt dust were below applicable occupational exposure criteria and did not indicate an airborne



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hazard to the decontamination workers. The California PEL is 0.02 mg/m³ for airborne cobalt dust.

However, this dust evaluation did indicate widespread cobalt dust contamination in different surfaces inside and outside the work area, with BNL elevated levels inside Simon Planck's office. Therefore the entire office area, including Simon's office, Engineering Room, Lobby, Break Room, Restrooms, Clean Room Test Lab, Stock Room and Conference Room should be isolated as a decontamination zone. All carpeted office areas should have the carpet removed and discarded as hazardous waste as this material is extremely porous and is a potential source of cobalt contamination.

All clearance wipe sample results for the warehouse/clean room were at or below the BNL "Free Release" level of 2 ug/100 cm² which is the maximum level allowed on accessible surfaces. Therefore this area can be set up as the Clean "Support" Zone for Belfor Environmental

This report serves as a weekly monitoring assessment report for this decontamination project at Quantum Labs.

Availability of Report/Disclaimer

The recommendations in this report are made on the basis of the findings at the workplace evaluated and may not be applicable to other workplaces. This report was prepared by Jorge Vizcaino, CIH/CHMM with Aero-Environmental Consulting, INC. Analytical support was provided by AIHA Accredited Laboratory ALS Environmental in Salt Lake City, Utah.

Sincerely,
Aero-Environmental Consulting, INC

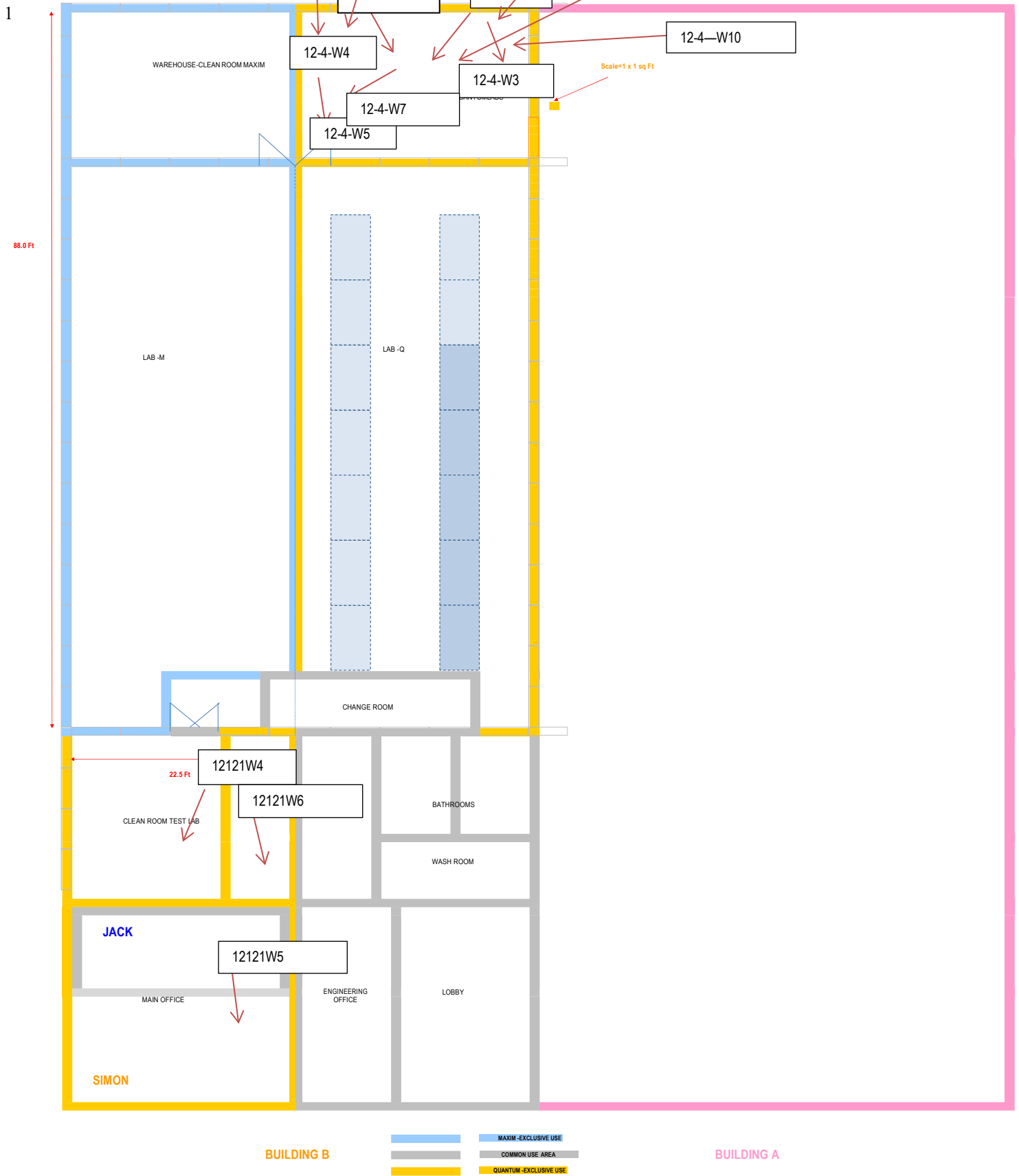
Jorge Vizcaino
Certified Industrial Hygienist No. 9814
Certified Hazardous Material Manager 19631

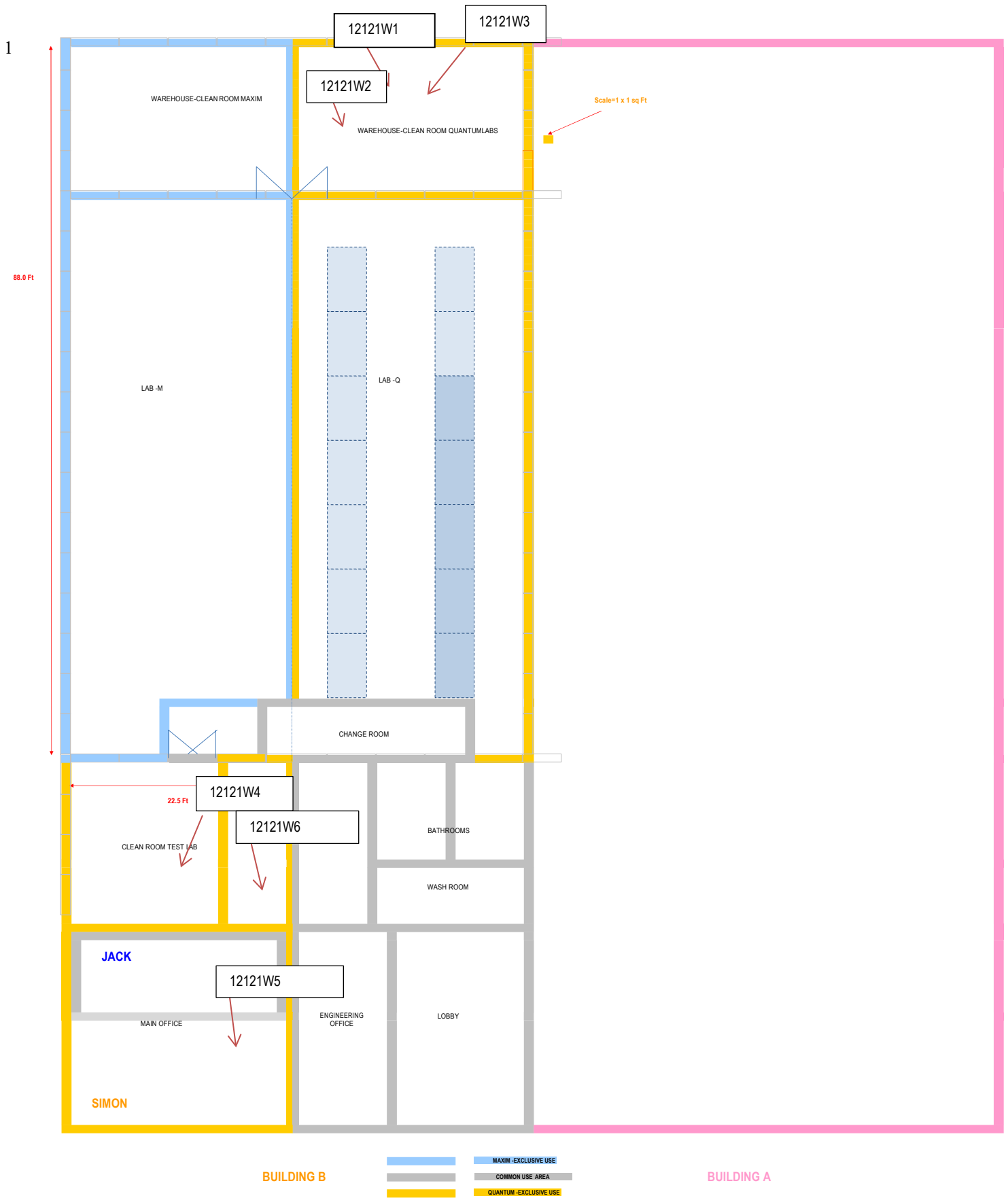




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FIGURE 1 AND 2-FLOOR PLANS WITH WIPE SAMPLING LOCATIONS







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APPENDIX A-FIELD DOCUMENTATION

AIR SAMPLING DATA SHEET

Sample Date:	Sample Number:	Sample Mfg/Model# Media Type	Sample Type (pers. area, blank):	Media ID:	Media Lot #
12/1/21	1212149	0.5 μ m MCE	Area		

Wind Speed (mph):

Wind Direction:

Relative Humidity (%):

Ambient Temperature:

F

Employee Name:	Area - Simon's Office
Employee Job Class	
Work Location	COMPLEX/BUILDING: Cleanroom / Test Lab / Simon's office

WORK CONDITIONS

Activity Monitored (Work descriptions, tasks, and task times):	
Process: <u>Decontamination</u>	Associated Materials (solvents, etc.): <u>Cobalt</u>
Ventilation Conditions/Special Conditions (hood use, local exhaust, etc.):	
Hood# _____	
PPE Used (Respirator type, suit, gloves, boots, etc.): <u>Full Face, M-level C</u>	
Exposure Task Frequency (circle): Daily Weekly Monthly Other (Specify):	

CALIBRATION DATA

Sampling Pump Mfg & Model:	Flow Rate	Units	Sample Start Time:
1			0852
Sampling Pump Serial No.:	*Start:		Sample End Time:
	3	L/min	1607
Calibration Method (Rotameter, Gilibrator):	*End:		Duration:
Rotameter	3	L/min	435 minutes
Calibration Date:	Ave.:		Volume:
12/1/21	3	L/min	1305 liters

*Must be within 10% for sample to be valid

Calibrator Mfg. & Model:	Calibrator Serial No.:	Annual Calibration Date:

ANALYSIS RESULTS

Substance	Concentration & Units	Exposure Limit & Originator
Cobalt	50000 μ g/m ³	Area

Analytical Method & Source:

Analytical Laboratory:

Collected by:	Date:	Calculated by:	Date:	Checked by:	Date:

INCLUDE ADDITIONAL COMMENTS AND ON BACKSIDE OF FORM
ATTACH CALIBRATION RECORDS AND ANALYSIS REPORT FROM LABORATORY

AIR SAMPLING DATA SHEET

Sample Date:	Sample Number:	Sample Mfg/Model# Media Type	Sample Type (pers, area, blank):	Media ID:	Media Lot #
12/1/21	12/21A3	0.8 um MCE	Area		

Wind Speed (mph):

Wind Direction:

Relative Humidity (%):

Ambient Temperature:

F

Employee Name:	Area		EID:
Employee Job Class			DEPT:
Work Location	COMPLEX/BUILDING:	2100 Perry Dr H0	UNIT/AREA: Negative Air Exhaust

WORK CONDITIONS

Activity Monitored (Work descriptions, tasks, and task times):	
Process: <u>Restroom</u>	Associated Materials (solvents, etc.): <u>Cobalt / Simple Green</u>
Ventilation Conditions/Special Conditions (hood use, local exhaust, etc.):	
Hood# _____	
PPE Used (Respirator type, suit, gloves, boots, etc.): <u>PAPR, Level C</u>	
Exposure Task Frequency (circle): Daily Weekly Monthly Other (Specify):	

CALIBRATION DATA

Sampling Pump Mfg & Model:	Flow Rate	Units	Sample Start Time:
5			8:45 / 8:55
Sampling Pump Serial No.:	*Start:		Sample End Time:
2400126	5	l/min	1:55
Calibration Method (Rotameter, Gilibrator):	*End:		Duration: minutes
Rotameter	3	l/min	
Calibration Date:	Ave.:		Volume: liters
12-1-21	3	l/min	240

*Must be within 10% for sample to be valid

Calibrator Mfg. & Model:	Calibrator Serial No.:	Annual Calibration Date:

ANALYSIS RESULTS

Substance	Concentration & Units	Exposure Limit & Originator
Cobalt	20000 mg/m ³	12 hr Sample

Analytical Method & Source:

Analytical Laboratory:

Collected by:	Date:	Calculated by:	Date:	Checked by:	Date:

INCLUDE ADDITIONAL COMMENTS AND ON BACKSIDE OF FORM
ATTACH CALIBRATION RECORDS AND ANALYSIS REPORT FROM LABORATORY

AIR SAMPLING DATA SHEET

Sample Date:	Sample Number:	Sample Mfg/Model# Media Type	Sample Type (pers. area, blank):	Media ID:	Media Lot #
12/1/21	12121A2	0.2 um nice	Pers		

Wind Speed (mph):

Wind Direction:

Relative Humidity (%):

Ambient Temperature:

F

Employee Name:	Nestor Escobar		EID:
Employee Job Class	Decon Tech		DEPT:
Work Location	COMPLEX/BUILDING:	UNIT/AREA:	
	1108 Perry Dr #10	F-6/L-6 Area	

WORK CONDITIONS

Activity Monitored (Work descriptions, tasks, and task times):

Process: Decon Associated Materials (solvents, etc.): Cobalt, Simple Green

Ventilation Conditions/Special Conditions (hood use, local exhaust, etc.):

Hood# _____

PPE Used (Respirator type, suit, gloves, boots, etc.): RAPR, Tyvek, gloves, boots

Exposure Task Frequency (circle): Daily Weekly Monthly Other (Specify):

CALIBRATION DATA

Sampling Pump Mfg & Model:	Flow Rate	Units	Sample Start Time:
4			0833 / 1520
Sampling Pump Serial No.:	*Start:		Sample End Time:
	3	L/min	1130 / 1546
Calibration Method (Rotameter, Gilibrator):	*End:		Duration:
Rotameter	3	L/min	5hr
Calibration Date:	Ave.:		minutes
12/1/21	3	L/min	23
			Volume:
			969 liters

257
226
5:23

*Must be within 10% for sample to be valid

Calibrator Mfg. & Model:	Calibrator Serial No.:	Annual Calibration Date:

ANALYSIS RESULTS

Substance	Concentration & Units	Exposure Limit & Originator
Cobalt	0.00018 mg/m ³	PEL 0.02 mg/m ³

Analytical Method & Source:

Analytical Laboratory:

Collected by:	Date:	Calculated by:	Date:	Checked by:	Date:

INCLUDE ADDITIONAL COMMENTS AND ON BACKSIDE OF FORM
ATTACH CALIBRATION RECORDS AND ANALYSIS REPORT FROM LABORATORY

AIR SAMPLING DATA SHEET

Sample Date:	Sample Number:	Sample Mfg/Model# Media Type	Sample Type (pers. area, blank):	Media ID:	Media Lot #
12/1/21	12121A1	0.8 MCE	Pers		

Wind Speed (mph):

Wind Direction:

Relative Humidity (%):

Ambient Temperature:

F

Employee Name:	Decon	EID:
Employee Job Class:	technician	DEPT:
Work Location:	2100 Berry Dr #10	UNIT/AREA: Fab/Edo
COMPLEX/BUILDING:		

WORK CONDITIONS

Activity Monitored (Work descriptions, tasks, and task times):	
Process: Decon	Associated Materials (solvents, etc.): Cobalt, Sample Green
Ventilation Conditions/Special Conditions (hood use, local exhaust, etc.):	
Hood#	
PPE Used (Respirator type, suit, gloves, boots, etc.): PAPP, 7-year, gloves, boots	
Exposure Task Frequency (circle): Daily Weekly Monthly Other (Specify):	

CALIBRATION DATA

Sampling Pump Mfg & Model:	Flow Rate	Units	Sample Start Time:
2			0828 1318
Sampling Pump Serial No.:	*Start:		Sample End Time:
	3L/min		1129 1550
Calibration Method (Rotameter, Gilibrator):	*End:		Duration:
Rotameter	3L/min		5 hr 33 min
Calibration Date:	Ave.:		Volume:
12/1/21	3L/min		999 liters
*Must be within 10% for sample to be valid			
Calibrator Mfg. & Model:	Calibrator Serial No.:	Annual Calibration Date:	

3 hr 1

2 hr 32

ANALYSIS RESULTS

Substance	Concentration & Units	Exposure Limit & Originator
Cobalt	0.006 mg/m ³	PEL 0.006 mg/m ³
		20 mg/m ³

Analytical Method & Source:

Analytical Laboratory:

Collected by:	Date:	Calculated by:	Date:	Checked by:	Date:
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INCLUDE ADDITIONAL COMMENTS AND ON BACKSIDE OF FORM
ATTACH CALIBRATION RECORDS AND ANALYSIS REPORT FROM LABORATORY

AIR SAMPLING DATA SHEET

Sample Date:	Sample Number:	Sample Mfg/Model# Media Type	Sample Type (pers. area, blank):	Media ID:	Media Lot #
12-2-2021	12221-A1		AREA PERIMETER		

Wind Speed (mph): Wind Direction: Relative Humidity (%): Ambient Temperature: F

Employee Name:	EID:
Employee Job Class:	DEPT:
Work Location:	COMPLEX/BUILDING: 2108 BERING DR. SAN JOSE, CA. UNIT/AREA: AT NEG. AIR EXHAUST

WORK CONDITIONS

Activity Monitored (Work descriptions, tasks, and task times):

Process: Associated Materials (solvents, etc.):

Ventilation Conditions/Special Conditions (hood use, local exhaust, etc.):

Hood#:

PPE Used (Respirator type, suit, gloves, boots, etc.):

Exposure Task Frequency (circle): Daily Weekly Monthly Other (Specify):

CALIBRATION DATA

Sampling Pump Mfg & Model:	Flow Rate	Units	Sample Start Time:
Sampling Pump Serial No.:	*Start:		8AM
Calibration Method (Rotameter, Gilibrator):	*End:		Sample End Time:
12-2-21	3.06L		Duration: 483 minutes
Calibration Date:	Ave.:		Volume: 1,477.98 liters
	3.06L		

*Must be within 10% for sample to be valid

Calibrator Mfg. & Model:	Calibrator Serial No.:	Annual Calibration Date:
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ANALYSIS RESULTS

Substance	Concentration & Units	Exposure Limit & Originator
Cobalt	20.37 mg/m ³	

Analytical Method & Source:

Analytical Laboratory:

Collected by:	Date:	Calculated by:	Date:	Checked by:	Date:
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INCLUDE ADDITIONAL COMMENTS AND ON BACKSIDE OF FORM
ATTACH CALIBRATION RECORDS AND ANALYSIS REPORT FROM LABORATORY

AIR SAMPLING DATA SHEET

Sample Date:	Sample Number:	Sample Mfg/Model# Media Type	Sample Type (pers, area, blank):	Media ID:	Media Lot #
12-2-21	12221 - A2		AREA PERIMETER		

Wind Speed (mph): 0

Wind Direction:

Relative Humidity (%):

Ambient Temperature:

F

Employee Name:	EID:
Employee Job Class	DEPT:
Work Location	COMPLEX/BUILDING: 2108 BERING DR. SAN JOSE, CA. UNIT/AREA: OFFICE

WORK CONDITIONS

Activity Monitored (Work descriptions, tasks, and task times):
Process: _____ Associated Materials (solvents, etc.): _____
Ventilation Conditions/Special Conditions (hood use, local exhaust, etc.):
Hood# _____
PPE Used (Respirator type, suit, gloves, boots, etc.):
Exposure Task Frequency (circle): Daily Weekly Monthly Other (Specify):

CALIBRATION DATA

Sampling Pump Mfg & Model:	Flow Rate	Units	Sample Start Time:
Sampling Pump Serial No.:	*Start:		8:10 AM
Calibration Method (Rotameter, Gilibrator):	3.06 L		Sample End Time:
Calibration Date:	*End:		3:31 PM
12-2-21	3.06 L		Duration: 441 minutes
	Ave:		Volume: 1,349.46 liters
	3.06 L		

*Must be within 10% for sample to be valid

Calibrator Mfg. & Model:	Calibrator Serial No.:	Annual Calibration Date:
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ANALYSIS RESULTS

Substance	Concentration & Units	Exposure Limit & Originator
Cobalt	0.037 mg/m ³	

Analytical Method & Source:

Analytical Laboratory:

Collected by:	Date:	Calculated by:	Date:	Checked by:	Date:
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INCLUDE ADDITIONAL COMMENTS AND ON BACKSIDE OF FORM
ATTACH CALIBRATION RECORDS AND ANALYSIS REPORT FROM LABORATORY

AIR SAMPLING DATA SHEET

Sample Date:	Sample Number:	Sample Mfg/Model# Media Type	Sample Type (pers, area, blank):	Media ID:	Media Lot #
12-2-21	12221-A3	37MM/0.8µm MCE	PERSONAL		

Wind Speed (mph): 0MPH Wind Direction: CALM Relative Humidity (%): Ambient Temperature: F

Employee Name:	<u>MARIO GARZA</u>		EID:
Employee Job Class			DEPT:
Work Location	COMPLEX/BUILDING: <u>2108 BERING DR. SANJOSE, CA</u> UNIT/AREA: <u>QUANTUM LABS</u>		

WORK CONDITIONS

Activity Monitored (Work descriptions, tasks, and task times):

Process CLEANING LAB TOOLS Associated Materials (solvents, etc.) SIMPLE GREEN & WATER

Ventilation Conditions/Special Conditions (hood use, local exhaust, etc.):

Hood#

PPE Used (Respirator type, suit, gloves, boots, etc.):

PAPR, CHEM SUIT, RUBBER GLOVES & WORK BOOTS

Exposure Task Frequency (circle): Daily Weekly Monthly Other (Specify):

CALIBRATION DATA

Sampling Pump Mfg & Model:	Flow Rate	Units	Sample Start Time:
<u>GILIAN BDXII</u>			<u>7:38AM</u>
Sampling Pump Serial No.:	*Start:		Sample End Time:
<u>20150607047</u>	<u>3.06L</u>		<u>4:05 PM</u>
Calibration Method (Rotameter, Gilibrator):	*End:		Duration: <u>366</u> minutes
<u>Rotameter</u>	<u>3.06L</u>		Volume: <u>1,119.96L</u>
Calibration Date:	Ave.:		
<u>12-2-21</u>	<u>3.06L</u>		

*Must be within 10% for sample to be valid

Calibrator Mfg. & Model:	Calibrator Serial No.:	Annual Calibration Date:

ANALYSIS RESULTS

Substance	Concentration & Units	Exposure Limit & Originator
<u>Cobalt</u>	<u>20.45 mg/m³</u>	<u>PEL</u> <u>0.02 mg/m³</u>

Analytical Method & Source:

Analytical Laboratory:

Collected by:	Date:	Calculated by:	Date:	Checked by:	Date:

INCLUDE ADDITIONAL COMMENTS AND ON BACKSIDE OF FORM
ATTACH CALIBRATION RECORDS AND ANALYSIS REPORT FROM LABORATORY

AIR SAMPLING DATA SHEET

Sample Date:	Sample Number:	Sample Mfg/Model# Media Type	Sample Type (pers. area. blank):	Media ID:	Media Lot #
12-2-21	12221-A4	31mm/0.8mm MCE	PERSONAL		

Wind Speed (mph): 0 MPH
CACM Wind Direction: Relative Humidity (%): Ambient Temperature: F

Employee Name:	KRISTEN DAVIS	EID:
Employee Job Class		DEPT:
Work Location	COMPLEX/BUILDING: 2108 BERING DR, SAN JOSE, CA. AREA: QUANTUM LABS	

WORK CONDITIONS

Activity Monitored (Work descriptions, tasks, and task times):

Process: CLEAN LAB TOOLS Associated Materials (solvents, etc.): SIMPLE GREEN & WATER

Ventilation Conditions/Special Conditions (hood use, local exhaust, etc.):

Hood# _____

PPE Used (Respirator type, suit, gloves, boots, etc.):

PAPR, CHEM. SUIT, RUBBER GLOVES & WORK BOOTS

Exposure Task Frequency (circle): Daily Weekly Monthly Other (Specify):

CALIBRATION DATA

Sampling Pump Mfg & Model:	Flow Rate	Units	Sample Start Time:
GILIAN BDX II			8:03 AM
Sampling Pump Serial No.:	*Start:		Sample End Time:
20120202024	3.06L		4:07 PM
Calibration Method (Rotameter, Gilibrator):	*End:		Duration: 340 minutes
Rotameter	3.06L		Volume: 1,040.40 Liters
Calibration Date:	Ave.:		
12-2-1	3.06L		

*Must be within 10% for sample to be valid

Calibrator Mfg. & Model:	Calibrator Serial No.:	Annual Calibration Date:

ANALYSIS RESULTS

Substance	Concentration & Units	Exposure Limit & Originator
Coalt	20.40 mg/m ³	PEL 0.02 mg/m ³

Analytical Method & Source:

Analytical Laboratory:

Collected by:	Date:	Calculated by:	Date:	Checked by:	Date:

INCLUDE ADDITIONAL COMMENTS AND ON BACKSIDE OF FORM
ATTACH CALIBRATION RECORDS AND ANALYSIS REPORT FROM LABORATORY

AERO ENVIRONMENTAL CONSULTING, INC

DAILY OBSERVATION LOG

Client: _____	Project _____	Date: <u>12/2/21</u>
Contractor: _____	Location: <u>2108 Bering Dr. in San Jose, Ca</u>	
AEC Project: _____	Work Area: _____	Page <u>1</u> of <u>2</u>
AEC Rep.: <u>David Kummer</u>		

SCHEDULE		
Estimated % complete _____	Plus _____ (days/weeks)	Minus _____ (days/weeks)

NOTICES ISSUED (check each)	
Pre-Abatement Visual _____ pass _____ fail Pre-Encapsulation Visual _____ pass _____ fail	Pre-Clearance Visual _____ pass _____ fail Pre-Clearance Monitoring _____ pass _____ fail

TESTING					
TYPE LEGEND:		TYPE	NO.	F/CC	%
1) Survey	2) 7) Clearance / outside	9)	10)	11)	12)
Outside / Ambient	3) 8) Clearance retest / in				
Baseline / Bkgd.	4) Clearance retest / out				
Work Area / inside	5) Personal sample				
Work Area / outside	6) Blank				
Clearance / inside					

OBSERVATION CHECKLIST									
WORK ITEMS	PASS	FAIL	N/A	CORR	WORK ITEMS	PASS	FAIL	N/A	CORR
If initialed-explain on pg 2					If initialed-explain on pg 2				
Barriers/Isolation/Containment					Emergency lights-Temp. power				
Decontamination system					Worker Protection				
Power Shut Down-Locked out					Proper Procedures				
HVAC shut down-sealed					Waste-packaging/labeling/stor				
Adequate negative pressure					Product equip. verification				
Proper signage posted					Product storage conditions				
Emergency exits clear					Replacement materials installed				
Fire Extinguishers					Air Monitoring				
Work Area Cleanliness					Other				
Work practices									

OBSERVATION LOG NOTES
<p>Thursday, December 2, 2021. Location 2108 Bering Dr. in San Jose, California. Start time 7 AM. Belfore has a crew of blank workers with Johnny Lubuw as lead man and Greg Henke as foreman. Belfore starts by having a safety meeting and go over the scope of the day. During cleaning AERO Environmental will set up personal air samples on two workers and also set up two perimeter air samples one is located at the exhaust of the negative air machines and the other one is in the big office in Suite B. The Belfore cleaning crew is using chemical resistant suit, PAPR's, work boots, and rubber gloves. First the crew will HEPA vacuum an area and then wet wipe it with simple green and water. Approximately 10:30 AM Belfore crew breaks for lunch. Approximately 12 PM crew returns from lunch and goes back to work. 12:15 PM crew removes some ducting from the building and loads it in 20 yard container. 2 PM Belfore crew comes out for a break. 2:30 PM crew is getting suited up to go back inside. Spoke with Jonny he said that they have finished cleaning the polisher and lapper equipment in the warehouse area. All day there has been no wind, weather</p>

DAILY OBSERVATION LOG

Client: _____	Project _____	Date: _____
Contractor: _____	Location: _____	
AEC Project: _____		
AEC Rep.: _____	Work Area: _____	Page _____ of _____

OBSERVATION LOG NOTES cont'd.

conditions are calm. Approximately 4 PM the crew comes out of containment area and will secure job site before leaving. At this time AERO environmental will collect personal air samples and leave site at approximately 430 p.m.

NAME (PRINT): David Kummer	SIGNATURE: <i>David Kummer</i>
TITLE: CSST	DATE: 11/22/2021



831.394.1199 E-Mail: Jorge@aero-enviro.com www.Aero-Enviro.com

APPENDIX B-Analytical Results



ANALYTICAL REPORT

Amended-20211207

Report Date: December 07, 2021

Jorge Vizcaino
Aero-Environmental Consulting
1426 Via Isola
Monterey, CA 93940

Phone: (831) 277-5831

E-mail: jorge@aero-enviro.com

Workorder: **34-2133803**

Client Project ID: 2108 Bering Dr #B

Purchase Order: NA

Project Manager: Stella Hanis

Analytical Results

Sample ID: 12121W1-Warehouse Floor		Collected: 12/01/2021	
Lab ID: 2133803001		Received: 12/02/2021	
Method: NIOSH 9102 Mod, Ghost Wipe		Instrument: ICP12	
Dilution: 1		Prepared: 12/03/2021 (287995)	
Sampling Parameter: Area 100 cm ²		Analyzed: 12/06/2021 (288071)	
Analyte	Result (ug/sample)	Result (ug/100cm ²)	RL (ug/sample)
Cobalt	0.77	0.77	0.075

Sample ID: 12121W2-Warehouse Elevated Horizontal Surface		Collected: 12/01/2021	
Lab ID: 2133803002		Received: 12/02/2021	
Method: NIOSH 9102 Mod, Ghost Wipe		Instrument: ICP12	
Dilution: 1		Prepared: 12/03/2021 (287995)	
Sampling Parameter: Area 100 cm ²		Analyzed: 12/06/2021 (288071)	
Analyte	Result (ug/sample)	Result (ug/100cm ²)	RL (ug/sample)
Cobalt	2.8	2.8	0.075

Sample ID: 12121W3-Warehouse Floor		Collected: 12/01/2021	
Lab ID: 2133803003		Received: 12/02/2021	
Method: NIOSH 9102 Mod, Ghost Wipe		Instrument: ICP12	
Dilution: 1		Prepared: 12/03/2021 (287995)	
Sampling Parameter: Area 100 cm ²		Analyzed: 12/06/2021 (288071)	
Analyte	Result (ug/sample)	Result (ug/100cm ²)	RL (ug/sample)
Cobalt	0.27	0.27	0.075



ANALYTICAL REPORT

Amended-20211207

Workorder: **34-2133803**

Client Project ID: 2108 Bering Dr #B

Purchase Order: NA

Project Manager: Stella Hanis

Analytical Results

Sample ID: 12121W4-Clean Room Test Lab Floor			Collected: 12/01/2021
Lab ID: 2133803004	Sampling Location: 2108 Bering Dr #B		Received: 12/02/2021
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP12	
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/03/2021 (287995)	
		Analyzed: 12/06/2021 (288071)	
Analyte	Result (ug/sample)	Result (ug/100cm ²)	RL (ug/sample)
Cobalt	0.13	0.13	0.075

Sample ID: 12121W5-Book Shelf-Simon's Office			Collected: 12/01/2021
Lab ID: 2133803005	Sampling Location: 2108 Bering Dr #B		Received: 12/02/2021
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP12	
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/03/2021 (287995)	
		Analyzed: 12/06/2021 (288071)	
Analyte	Result (ug/sample)	Result (ug/100cm ²)	RL (ug/sample)
Cobalt	3.2	3.2	0.075

Sample ID: 12121W6-Stock Room			Collected: 12/01/2021
Lab ID: 2133803006	Sampling Location: 2108 Bering Dr #B		Received: 12/02/2021
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP12	
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/03/2021 (287995)	
		Analyzed: 12/06/2021 (288071)	
Analyte	Result (ug/sample)	Result (ug/100cm ²)	RL (ug/sample)
Cobalt	0.15	0.15	0.075

Sample ID: 12121A1			Collected: 12/01/2021
Lab ID: 2133803007	Sampling Location: 2108 Bering Dr #B		Received: 12/02/2021
Method: NIOSH 7300 Mod., MCE	Media: MCE Filter	Instrument: ICP12	
Dilution: 1	Sampling Parameter: Air Volume 999 L	Prepared: 12/03/2021 (287996)	
		Analyzed: 12/06/2021 (288071)	
Analyte	Result (ug/sample)	Result (mg/m ³)	RL (ug/sample)
Cobalt	1.6	0.0016	0.075



ANALYTICAL REPORT

Amended-20211207

Workorder: **34-2133803**

Client Project ID: 2108 Bering Dr #B

Purchase Order: NA

Project Manager: Stella Hanis

Analytical Results

Sample ID: 12121A2		Collected: 12/01/2021	
Lab ID: 2133803008		Received: 12/02/2021	
Method: NIOSH 7300 Mod., MCE		Instrument: ICP12	
Dilution: 1		Prepared: 12/03/2021 (287996)	
Media: MCE Filter		Analyzed: 12/06/2021 (288071)	
Sampling Parameter: Air Volume 969 L			
Analyte	Result (ug/sample)	Result (mg/m ³)	RL (ug/sample)
Cobalt	0.17	0.00018	0.075

Sample ID: 12121A3		Collected: 12/01/2021	
Lab ID: 2133803009		Received: 12/02/2021	
Method: NIOSH 7300 Mod., MCE		Instrument: ICP12	
Dilution: 1		Prepared: 12/03/2021 (287996)	
Media: MCE Filter		Analyzed: 12/06/2021 (288071)	
Sampling Parameter: Air Volume 240 L			
Analyte	Result (ug/sample)	Result (mg/m ³)	RL (ug/sample)
Cobalt	<0.075	<0.00031	0.075

Sample ID: 12121A4		Collected: 12/01/2021	
Lab ID: 2133803010		Received: 12/02/2021	
Method: NIOSH 7300 Mod., MCE		Instrument: ICP12	
Dilution: 1		Prepared: 12/03/2021 (287996)	
Media: MCE Filter		Analyzed: 12/06/2021 (288071)	
Sampling Parameter: Air Volume 1305 L			
Analyte	Result (ug/sample)	Result (mg/m ³)	RL (ug/sample)
Cobalt	<0.075	<0.000057	0.075

Sample ID: 12121FB		Collected: 12/01/2021	
Lab ID: 2133803011		Received: 12/02/2021	
Method: NIOSH 7300 Mod., MCE		Instrument: ICP12	
Dilution: 1		Prepared: 12/03/2021 (287996)	
Media: MCE Filter		Analyzed: 12/06/2021 (288071)	
Sampling Parameter: Air Volume Not Applicable			
Analyte	Result (ug/sample)	Result (mg/m ³)	RL (ug/sample)
Cobalt	<0.075	NA	0.075

Comments

Workorder: 2133803

Amended(12/07/2021): Update Sample IDs with locations

Report Authorization (/S/ is an electronic signature that complies with 21 CFR Part 11)

Method (Analysis Batch)	Analyst	Peer Review
NIOSH 7300 Mod., MCE (288071)	/S/ Rex Bagley 12/06/2021 13:44	/S/ Kristie F. Bitner 12/06/2021 14:49

**ANALYTICAL REPORT****Amended-20211207**Workorder: **34-2133803**

Client Project ID: 2108 Bering Dr #B

Purchase Order: NA

Project Manager: Stella Hanis

Report Authorization (/S/ is an electronic signature that complies with 21 CFR Part 11)

Method (Analysis Batch)	Analyst	Peer Review
NIOSH 9102 Mod, Ghost Wipe (288071)	/S/ Rex Bagley 12/06/2021 13:44	/S/ Kristie F. Bitner 12/06/2021 14:49

Laboratory Contact Information

ALS Environmental
960 W Levoy Drive
Salt Lake City, Utah 84123

Phone: (801) 266-7700
Email: als@alstglobal.com
Web: www.alssl.com

General Lab Comments

The results provided in this report relate only to the items tested.

Samples were received in acceptable condition unless otherwise noted.

The following was provided by the client: Sample ID, Collection Date, Sampling Location, Media Type, Sampling Parameter. Collection Date, Media Type, and Sampling Parameter can potentially affect the validity of the results.

Samples have not been blank corrected unless otherwise noted.

This test report shall not be reproduced, except in full, without written approval of ALS.

ALS provides professional analytical services for all samples submitted. ALS is not in a position to interpret the data and assumes no responsibility for the quality of the samples submitted.

All quality control samples processed with the samples in this report yielded acceptable results unless otherwise noted.

ALS is accredited for specific fields of testing (scopes) in the following testing sectors. The quality system implemented at ALS conforms to accreditation requirements and is applied to all analytical testing performed by ALS. The following table lists testing sector, accreditation body, accreditation number and website. Please contact these accrediting bodies or your ALS project manager for the current scope of accreditation that applies to your analytical testing.

Testing Sector	Accreditation Body (Standard)	Certificate Number	Website
Environmental	PJLA (DoD ELAP)	L20-57	http://www.pjllabs.com
	PJLA (ISO 17025)	L20-58	http://www.pjllabs.com
Industrial Hygiene	AIHA (ISO 17025 & AIHA IHLAP)	101574	http://www.aihaaccreditedlabs.org
	DOECAP-AP	L20-59	http://www.pjllabs.com
	Washington	C596	https://ecology.wa.gov/Regulations-Permits/Permits-certifications/Laboratory-Accreditation
Dietary Supplements	PJLA (ISO 17025)	L20-58	http://www.pjllabs.com

Definitions

LOD = Limit of Detection = MDL = Method Detection Limit, A statistical estimate of method/media/instrument sensitivity.

LOQ = Limit of Quantitation = RL = Reporting Limit, A verified value of method/media/instrument sensitivity.

ND = Not Detected, Testing result not detected above the LOD or LOQ.

NA = Not Applicable.

** No result could be reported, see sample comments for details.

< Means this testing result is less than the numerical value.

() This testing result is between the LOD and LOQ and has higher analytical uncertainty than values at or above the LOQ.



ANALYTICAL REPORT

Report Date: December 07, 2021

Jorge Vizcaino
Aero-Environmental Consulting
1426 Via Isola
Monterey, CA 93940

Phone: (831) 277-5831

E-mail: jorge@aero-enviro.com

Workorder: **34-2134131**

Client Project ID: 2108 Bering Dr Ste B
Purchase Order: NA
Project Manager: Stella Hanis

Analytical Results

Sample ID: 12-4-W1		Collected: 12/04/2021	
Lab ID: 2134131001		Received: 12/07/2021	
Sampling Location: 2108 Bering Dr Ste B			
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP13	
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/07/2021 (288132)	
		Analyzed: 12/07/2021 (288145)	
Analyte	Result (ug/sample)	Result (ug/100cm ²)	RL (ug/sample)
Cobalt	0.52	0.52	0.075

Sample ID: 12-4-W2		Collected: 12/04/2021	
Lab ID: 2134131002		Received: 12/07/2021	
Sampling Location: 2108 Bering Dr Ste B			
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP13	
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/07/2021 (288132)	
		Analyzed: 12/07/2021 (288145)	
Analyte	Result (ug/sample)	Result (ug/100cm ²)	RL (ug/sample)
Cobalt	0.25	0.25	0.075

Sample ID: 12-4-W3		Collected: 12/04/2021	
Lab ID: 2134131003		Received: 12/07/2021	
Sampling Location: 2108 Bering Dr Ste B			
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP13	
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/07/2021 (288132)	
		Analyzed: 12/07/2021 (288145)	
Analyte	Result (ug/sample)	Result (ug/100cm ²)	RL (ug/sample)
Cobalt	<0.075	<0.075	0.075



ANALYTICAL REPORT

Workorder: **34-2134131**

Client Project ID: 2108 Bering Dr Ste B

Purchase Order: NA

Project Manager: Stella Hanis

Analytical Results

Sample ID: 12-4-W4		Collected: 12/04/2021	
Lab ID: 2134131004		Received: 12/07/2021	
Sampling Location: 2108 Bering Dr Ste B			
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP13	
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/07/2021 (288132)	
		Analyzed: 12/07/2021 (288145)	
Analyte	Result (ug/sample)	Result (ug/100cm ²)	RL (ug/sample)
Cobalt	0.94	0.94	0.075

Sample ID: 12-4-W5		Collected: 12/04/2021	
Lab ID: 2134131005		Received: 12/07/2021	
Sampling Location: 2108 Bering Dr Ste B			
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP13	
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/07/2021 (288132)	
		Analyzed: 12/07/2021 (288145)	
Analyte	Result (ug/sample)	Result (ug/100cm ²)	RL (ug/sample)
Cobalt	1.2	1.2	0.075

Sample ID: 12-4-W6		Collected: 12/04/2021	
Lab ID: 2134131006		Received: 12/07/2021	
Sampling Location: 2108 Bering Dr Ste B			
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP13	
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/07/2021 (288132)	
		Analyzed: 12/07/2021 (288145)	
Analyte	Result (ug/sample)	Result (ug/100cm ²)	RL (ug/sample)
Cobalt	0.10	0.10	0.075

Sample ID: 12-4-W7		Collected: 12/04/2021	
Lab ID: 2134131007		Received: 12/07/2021	
Sampling Location: 2108 Bering Dr Ste B			
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP13	
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/07/2021 (288132)	
		Analyzed: 12/07/2021 (288145)	
Analyte	Result (ug/sample)	Result (ug/100cm ²)	RL (ug/sample)
Cobalt	2.0	2.0	0.075



ANALYTICAL REPORT

Workorder: **34-2134131**

Client Project ID: 2108 Bering Dr Ste B

Purchase Order: NA

Project Manager: Stella Hanis

Analytical Results

Sample ID: 12-4-W8		Collected: 12/04/2021	
Lab ID: 2134131008		Received: 12/07/2021	
Method: NIOSH 9102 Mod, Ghost Wipe		Instrument: ICP13	
Dilution: 1		Prepared: 12/07/2021 (288132)	
Sampling Parameter: Area 100 cm ²		Analyzed: 12/07/2021 (288145)	
Sampling Location: 2108 Bering Dr Ste B			
Analyte	Result (ug/sample)	Result (ug/100cm ²)	RL (ug/sample)
Cobalt	0.17	0.17	0.075

Sample ID: 12-4-W9		Collected: 12/04/2021	
Lab ID: 2134131009		Received: 12/07/2021	
Method: NIOSH 9102 Mod, Ghost Wipe		Instrument: ICP13	
Dilution: 1		Prepared: 12/07/2021 (288132)	
Sampling Parameter: Area 100 cm ²		Analyzed: 12/07/2021 (288145)	
Sampling Location: 2108 Bering Dr Ste B			
Analyte	Result (ug/sample)	Result (ug/100cm ²)	RL (ug/sample)
Cobalt	0.42	0.42	0.075

Sample ID: 12-4-W10		Collected: 12/04/2021	
Lab ID: 2134131010		Received: 12/07/2021	
Method: NIOSH 9102 Mod, Ghost Wipe		Instrument: ICP13	
Dilution: 1		Prepared: 12/07/2021 (288132)	
Sampling Parameter: Area 100 cm ²		Analyzed: 12/07/2021 (288145)	
Sampling Location: 2108 Bering Dr Ste B			
Analyte	Result (ug/sample)	Result (ug/100cm ²)	RL (ug/sample)
Cobalt	0.53	0.53	0.075

Sample ID: 12-4-FB		Collected: 12/04/2021	
Lab ID: 2134131011		Received: 12/07/2021	
Method: NIOSH 9102 Mod, Ghost Wipe		Instrument: ICP13	
Dilution: 1		Prepared: 12/07/2021 (288132)	
Sampling Parameter: Area Not Applicable		Analyzed: 12/07/2021 (288145)	
Sampling Location: 2108 Bering Dr Ste B			
Analyte	Result (ug/sample)	Result (ug/100cm ²)	RL (ug/sample)
Cobalt	<0.075	NA	0.075

Report Authorization (/S/ is an electronic signature that complies with 21 CFR Part 11)

Method (Analysis Batch)	Analyst	Peer Review
NIOSH 9102 Mod, Ghost Wipe (288145)	/S/ Peter P. Steen 12/07/2021 14:27	/S/ Kristie F. Bitner 12/07/2021 15:08

**ANALYTICAL REPORT**Workorder: **34-2134131**

Client Project ID: 2108 Bering Dr Ste B

Purchase Order: NA

Project Manager: Stella Hanis

Laboratory Contact Information

ALS Environmental
960 W Levoy Drive
Salt Lake City, Utah 84123

Phone: (801) 266-7700
Email: alslt.lab@ALSGlobal.com
Web: www.alssl.com

General Lab Comments

The results provided in this report relate only to the items tested.

Samples were received in acceptable condition unless otherwise noted.

The following was provided by the client: Sample ID, Collection Date, Sampling Location, Media Type, Sampling Parameter. Collection Date, Media Type, and Sampling Parameter can potentially affect the validity of the results.

Samples have not been blank corrected unless otherwise noted.

This test report shall not be reproduced, except in full, without written approval of ALS.

ALS provides professional analytical services for all samples submitted. ALS is not in a position to interpret the data and assumes no responsibility for the quality of the samples submitted.

All quality control samples processed with the samples in this report yielded acceptable results unless otherwise noted.

ALS is accredited for specific fields of testing (scopes) in the following testing sectors. The quality system implemented at ALS conforms to accreditation requirements and is applied to all analytical testing performed by ALS. The following table lists testing sector, accreditation body, accreditation number and website. Please contact these accrediting bodies or your ALS project manager for the current scope of accreditation that applies to your analytical testing.

Testing Sector	Accreditation Body (Standard)	Certificate Number	Website
Environmental	PJLA (DoD ELAP)	L20-57	http://www.pjlabs.com
	PJLA (ISO 17025)	L20-58	http://www.pjlabs.com
Industrial Hygiene	AIHA (ISO 17025 & AIHA IHLAP)	101574	http://www.aihaaccreditedlabs.org
	DOECAP-AP	L20-59	http://www.pjlabs.com
	Washington	C596	https://ecology.wa.gov/Regulations-Permits/Permits-certifications/Laboratory-Accreditation
Dietary Supplements	PJLA (ISO 17025)	L20-58	http://www.pjlabs.com

Definitions

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LOQ = Limit of Quantitation = RL = Reporting Limit, A verified value of method/media/instrument sensitivity.

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< Means this testing result is less than the numerical value.

() This testing result is between the LOD and LOQ and has higher analytical uncertainty than values at or above the LOQ.



LA Testing

5431 Industrial Drive, Huntington Beach, CA 92649

Phone: (714) 828-4999 Fax: (714) 828-4944 Email: gardengrovelab@latesting.com

Attn: **Jorge Vizcaino**
Aero-Environmental Consulting, Inc.
1426 Via Isola
Monterey, CA 93940
Phone: (831) 394-1199
Fax:

12/8/2021

The following analytical report covers the analysis performed on samples submitted to LA Testing on 12/6/2021. The results are tabulated on the attached data pages for the following client designated project:

Quantum Labs

The reference number for these samples is EMSL Order #332129185. Please use this reference when calling about these samples. If you have any questions, please do not hesitate to contact me at (714) 828-4999.

Approved By:

Michael Chapman, Laboratory Manager

The samples associated with this report were received in good condition unless otherwise noted. This report relates only to those items tested as received by the laboratory. The QC data associated with the sample results meet the recovery and precision requirements unless specifically indicated. The final results are not blank corrected unless specifically indicated. The laboratory is not responsible for final results calculated using air volumes that have been provided by non-laboratory personnel. This report may not be reproduced except in full and without written approval by EMSL Analytical, Inc.

**LA Testing**

5431 Industrial Drive, Huntington Beach, CA 92649

Phone/Fax: (714) 828-4999 / (714) 828-4944

<http://www.LATesting.com>gardengrovelab@lateesting.com

LA Testing Order: 332129185

CustomerID: 32AECO77

CustomerPO:

ProjectID:

Attn: **Jorge Vizcaino**
Aero-Environmental Consulting, Inc.
1426 Via Isola
Monterey, CA 93940

Phone: (831) 394-1199
 Fax:
 Received: 12/6/2021 11:20 AM
 Collected: 12/2/2021

Project: Quantum Labs

Analytical Results

Client Sample Description 12221-A1
 at neg, air machine exhaust outside of bldg. **Collected:** 12/2/2021 **Lab ID:** 332129185-0001

Method	Parameter	Result	RL	Units	Prep Date & Analyst	Analysis Date & Analyst
METALS						
7300 Modified	Cobalt	<0.34	0.34	µg/m³	12/7/2021 TH	12/7/2021 TH

Client Sample Description 12221-A2
 Perimeter air sample in office **Collected:** 12/2/2021 **Lab ID:** 332129185-0002

Method	Parameter	Result	RL	Units	Prep Date & Analyst	Analysis Date & Analyst
METALS						
7300 Modified	Cobalt	<0.37	0.37	µg/m³	12/7/2021 TH	12/7/2021 TH

Client Sample Description 12221-A3
 Personal air sample on Mario Garza **Collected:** 12/2/2021 **Lab ID:** 332129185-0003

Method	Parameter	Result	RL	Units	Prep Date & Analyst	Analysis Date & Analyst
METALS						
7300 Modified	Cobalt	<0.45	0.45	µg/m³	12/7/2021 TH	12/7/2021 TH

Client Sample Description 12221-A4
 Personal air Sample on Kristen Davis **Collected:** 12/2/2021 **Lab ID:** 332129185-0004

Method	Parameter	Result	RL	Units	Prep Date & Analyst	Analysis Date & Analyst
METALS						
7300 Modified	Cobalt	<0.48	0.48	µg/m³	12/7/2021 TH	12/7/2021 TH

Definitions:

MDL - method detection limit

J - Result was below the reporting limit, but at or above the MDL

ND - indicates that the analyte was not detected at the reporting limit

RL - Reporting Limit (Analytical)

D - Dilution Sample required a dilution which was used to calculate final results



Chain of Custody

EMSL Order Number (Lab Use Only):

#332129185

5431 Industrial Drive

Huntington Beach, CA 92649

PHONE: (714) 828-4999

FAX: (714) 828-4944

Company: Aero-Environmental Consulting, Inc.		EMSL-Bill to: <input checked="" type="checkbox"/> Same <input type="checkbox"/> Different If Bill to is Different note instructions in Comments**	
Street: 1426 Via Isola		Third Party Billing requires written authorization from third party	
City: Monterey	State/Province: CA	Zip/Postal Code: 93940	Country: US
Report To (Name): Jorge Vizcaino		Telephone #: 831.394.1199	
Email Address: Jorge@Aero-Enviro.com		Fax #:	Purchase Order:
Project Name/Number: Quantum Labs		Please Provide Results: <input type="checkbox"/> FAX <input checked="" type="checkbox"/> E-mail <input type="checkbox"/> Mail	
U.S. State Samples Taken: CA		Connecticut Samples: Commercial Residential	
Turnaround Time (TAT) Options* - Please Check			
<input type="checkbox"/> 3 Hour <input type="checkbox"/> 6 Hour <input type="checkbox"/> 24 Hour <input checked="" type="checkbox"/> 48 Hour <input type="checkbox"/> 72 Hour <input type="checkbox"/> 96 Hour <input type="checkbox"/> 1 Week <input type="checkbox"/> 2 Week			
*For RUSH TAT's Please Call Ahead to Confirm Lab Hours and Availability. Not all TAT options are valid for every test. Materials Science and IAQ TATs are in Business Days rather than Hours (i.e. 24 Hour = End of Next Business Day)			
Asbestos			
PCM - Air <input type="checkbox"/> NIOSH 7400 <input type="checkbox"/> w/ 8hr. TWA TEM - Air <input type="checkbox"/> 4.4.5hr TAT(AHERA ONLY) <input type="checkbox"/> AHERA 40 CFR, Part 763 <input type="checkbox"/> NIOSH 7402 <input type="checkbox"/> EPA Level II <input type="checkbox"/> ISO 10312 TEM - Water Fibers >10µm <input type="checkbox"/> Waste <input type="checkbox"/> Drinking All Fiber Sizes <input type="checkbox"/> Waste <input type="checkbox"/> Drinking		PLM - Bulk <input type="checkbox"/> PLM EPA 600/R-93/116 <input type="checkbox"/> PLM EPA NOB (<1%) <input type="checkbox"/> NYS 198.1 (friable-NY) <input type="checkbox"/> NYS 198.6 (non-friable-NY) Point Count <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1000 (<0.1%) Point Count w/ Gravimetric <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1000 (<0.1%) TEM - Dust <input type="checkbox"/> Microvac - ASTM D 5755 <input type="checkbox"/> Wipe-ASTM D6480	
Flame Atomic Absorption <input type="checkbox"/> Chips SW846-7000B or AOAC 974.02 <input type="checkbox"/> Soil SW846-7000B/7420 <input type="checkbox"/> Air NIOSH 7082 <input type="checkbox"/> Wastewater SM3111B or SW846-7000B/7420 <input type="checkbox"/> ASTM Wipe SW846-7000B/7420 <input type="checkbox"/> non ASTM Wipe SW846-7000B/7420 <input type="checkbox"/> TCLP SW846-1311/7420/SM 3111B		ICP <input checked="" type="checkbox"/> Air NIOSH 7300 Modified COBALT <input type="checkbox"/> non ASTM Wipe SW846-6010B or C <input type="checkbox"/> ASTM Wipe SW846-6010B or C <input type="checkbox"/> Soil SW846-6010 B or C <input type="checkbox"/> Waste Water SW846-6010B or C <input type="checkbox"/> TCLP SW846-6010B or C Other: <input type="checkbox"/>	
Graphite Furnace Atomic Absorption <input type="checkbox"/> Soil SW846-7421 <input type="checkbox"/> Wastewater EPA 200.9 <input type="checkbox"/> Air NIOSH 7105 <input type="checkbox"/> Drinking Water EPA 200.9		Materials Science <input type="checkbox"/> Common Particle ID (large particles) <input type="checkbox"/> Full Particle ID (environmental dust) <input type="checkbox"/> Basic Material ID (solids) <input type="checkbox"/> Advanced Material ID <input type="checkbox"/> Physical Testing (Tensile, Compression) <input type="checkbox"/> Combustion-by-products (soot, char, etc.) <input type="checkbox"/> X-Ray Fluorescence (elem. analysis) <input type="checkbox"/> X-Ray Diffraction (Crystalline Part.) <input type="checkbox"/> MMVF's (Fibrous glass, RCF's) <input type="checkbox"/> Particle Size (sieve/microscopy/laser) <input type="checkbox"/> Combustible Dust <input type="checkbox"/> Petrographic Examination Other: <input type="checkbox"/>	
Microbiology			
Wipe and Bulk Samples <input type="checkbox"/> Mold & Fungi - Direct Examination <input type="checkbox"/> Mold & Fungi Culture (Genus Only) <input type="checkbox"/> Mold & Fungi Culture (Genus & Species) <input type="checkbox"/> Bacterial Count & ID (Up to Three Types) <input type="checkbox"/> Bacterial Count & ID (Up to Five Types) <input type="checkbox"/> MRSA <input type="checkbox"/> Pseudomonas aeruginosa Water Samples <input type="checkbox"/> Total Coliform & E.coli (P/A) <input type="checkbox"/> Fecal Coliform (SM 9222D) <input type="checkbox"/> Sewage Screen <input type="checkbox"/> Heterotrophic Plate Count (SM 9215)		Air Samples <input type="checkbox"/> Mold & Fungi (Spore Trap) <input type="checkbox"/> Mold & Fungi Culture (Genus Only) <input type="checkbox"/> Mold & Fungi (Genus & Species) <input type="checkbox"/> Bacterial Culture & ID (Up to Three Types) <input type="checkbox"/> Bacterial Culture & ID (Up to Five Types) <input type="checkbox"/> Endotoxin Testing Real Time Q-PCR (See Analytical Guide for Code) Code: Legionella <input type="checkbox"/> Level 1 <input type="checkbox"/> Level 2 <input type="checkbox"/> Level 3 <input type="checkbox"/> Level 4 Other: <input type="checkbox"/>	
**Comments/Special Instructions: ANALYZE FOR COBALT			
Client Sample #'s		Total # of Samples: 4	
Relinquished (Client): David Kummer		Date: 12-2-2021	
Received (Lab): EMEX		Date: 12/6/21	
		Time: 11:20AM	

Analysis Completed in Accordance with EMSL's Terms and Conditions located in the Analytical Price Guide



Chain of Custody

EMSL Order Number *(Lab Use Only)*:

#332129185

5431 Industrial Drive

Huntington Beach, CA 92649

PHONE: (714) 828-4999

FAX: (714) 828-4944

[illegible]

Analysis Completed in Accordance with EMSL's Terms and Conditions located in the Analytical Price Guide



831.394.1199 E-Mail: Jorge@aero-enviro.com www.Aero-Enviro.com

APPENDIX C-PHOTOGRAPHIC DOCUMENTATION



Photo 1-Interior of Facility with Negative HEPA Air Machines



Photo 2-Interior Corridor

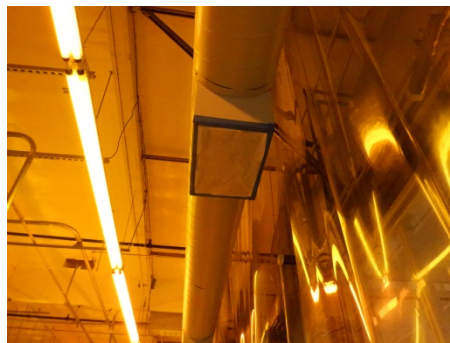


Photo 3-Critical barriers on ventilation duct exhausts



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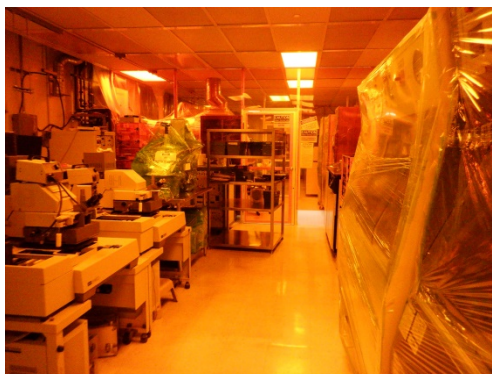


Photo 4-Interior of Lab M

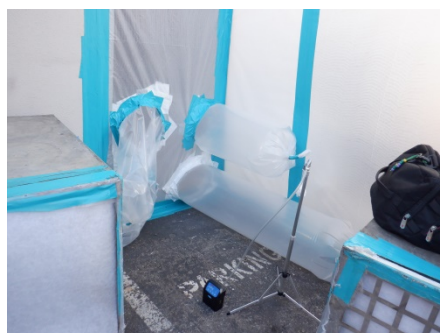


Photo 5-Perimeter Air Sample by Negative Air Pressure Exhaust



Photo 6-Simon Planck's Office



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Photo 7-Air sample collection in Clean Room Test Lab



Photo 8-Baseline wipe sample in warehouse floor



Photo 9-Baseline wipe sample on horizontal hood bench of Warehouse



831.394.1199 E-Mail: Jorge@aero-enviro.com www.Aero-Enviro.com



Photo 10-Baseline wipe sample in Clean Room Test Lab



Photo 11-Baseline wipe sample with elevated cobalt levels in Simon's Office



Photo 12-Warehouse Area with Clearance Wipe Samples



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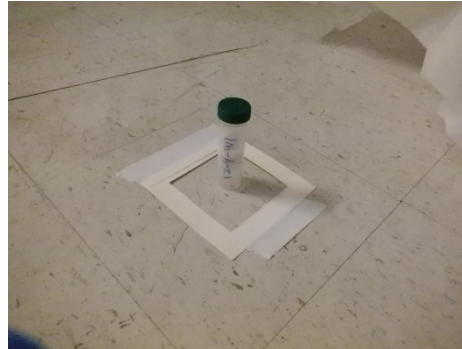


Photo 13-Clearance Wipe Sample on Warehouse Floor



Photo 14-Clearance Wipe Sample on horizontal equipment surface of Warehouse Area

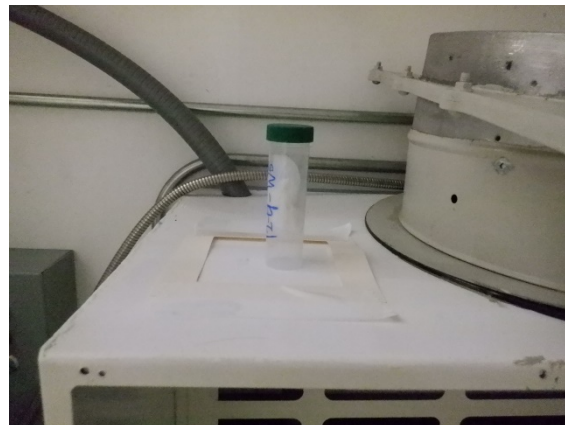


Photo 15-Clearance Wipe Sample on horizontal bench of Warehouse area



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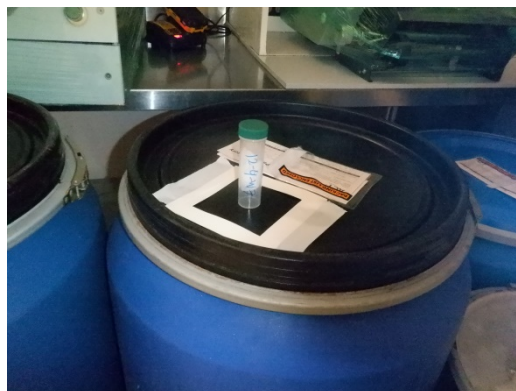


Photo 16-Clearance Wipe Sample on Plastic Storage Drum



Photo 17-Clearance Wipe Sample of Dividing Door

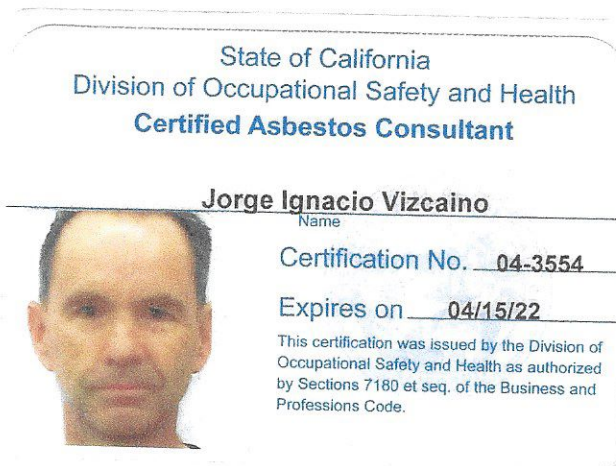


Photo 18-Clearance Wipe Sample above Equipment in Warehouse Area



831.394.1199 E-Mail: Jorge@aero-enviro.com www.Aero-Enviro.com

APPENDIX D-Professional Certifications



The Board for Global EHS Credentialing (BGC)

through its vested authority, hereby confirms that

Jorge I. Vizcaino

has met all requirements of education, experience, and examination, and on-going maintenance set forth through the BGC's American Board of Industrial Hygiene®'s (ABIH®) credentialing division for re-certification in the Comprehensive Practice of Industrial Hygiene and is thereby conferred the credential of

Certified Industrial Hygienist® (CIH®)

The aforementioned individual is given all rights, privileges, and responsibilities as both a diplomate of the BGC and holder of the CIH credential, provided that the credential is not suspended or revoked, and it is renewed annually. Moreover, the holder must meet all recertification requirements, including the obligation to practice ethically as prescribed by the BGC.



Credential Number: 9814 CP

Award Date: October 4, 2010

Expiration Date: June 1, 2026

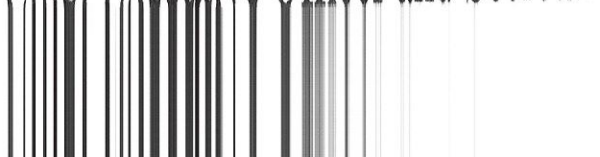
A handwritten signature in blue ink, reading "Cynthia Hanko", written over a horizontal line.

Cynthia Hanko, CIH
Chair of the Board of Directors



A handwritten signature in blue ink, reading "Ulric K. Chung", written over a horizontal line.

Ulric K. Chung, MCS, PhD
Chief Executive Officer and Secretary



From: recertinfo@ihmm.org
To: [Jorge Vizcaino](#)
Subject: Congratulations on Recertifying Your CHMM!
Date: Thursday, November 5, 2020 10:38:14 AM

Dear Vizcaino,

Congratulations on successfully recertifying your CHMM credential! Thank you for your continued effort in safety when working with hazardous materials. You are one of the many reasons why this world is a safer place to live. The amount of time you have taken to recertify has not gone unnoticed by the IHMM staff.

Your recertification application has been processed for the cycle ending 10/31/2021. Your new credential expiration date is 10/31/2026.

Please use this electronic copy of your **CHMM Letter of Compliance** as proof of credential and for any third-party verification needs until your presentation copies of your CHMM Letter of Compliance (proof of credential) and Certificate (suitable for display) arrive.

IHMM certifications are the standard of excellence in the hazardous materials industry. As an IHMM credential holder, you can:

- Validate your expertise in many areas
- Distinguish yourself in a competitive marketplace
- Increase your employment options
- Demonstrate ongoing competence
- Expand your professional network
- Benefit from public sector outreach
- Receive global recognition

You are now authorized to continue using your credential designation through the expiration date listed in your *MyIHMM* account online and on your certificate as long as you adhere to the CHMM Code of Ethics, remain in good standing, and maintain all required fees.

Remember to regularly access your *MyIHMM* account to monitor your certification and fee due dates, to maintain your record's accuracy and to keep abreast of certification news. As a Certificant you agree to the proper use of the logo and acronym designation, and to surrender the certificate in the event of withdrawal of certification by IHMM.

We appreciate your continued support of IHMM and your commitment to the professional excellence embodied in your credential.

Sincerely,



Gene Guilford
Executive Director



Institute of Hazardous Materials Management
9210 Corporate Blvd., Suite 470 | Rockville, MD 20850
(301) 984-8969 | (301) 984-1516 fax





STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC HEALTH



LEAD-RELATED CONSTRUCTION CERTIFICATE

INDIVIDUAL:



Jorge Vizcaino

CERTIFICATE TYPE:

Lead Inspector/Assessor

NUMBER:

LRC-00001930

EXPIRATION DATE:

11/3/2022

Disclaimer: This document alone should not be relied upon to confirm certification status. Compare the individual's photo and name to another valid form of government issued photo identification. Verify the individual's certification status by searching for Lead-Related Construction Professionals at www.cdph.ca.gov/programs/clppb or calling (800) 597-LEAD.





STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC HEALTH



LEAD-RELATED CONSTRUCTION CERTIFICATE

INDIVIDUAL:



David Kummer

CERTIFICATE TYPE:

Lead Sampling Technician

NUMBER:

LRC-00007343

EXPIRATION DATE:

10/27/2022

Disclaimer: This document alone should not be relied upon to confirm certification status. Compare the individual's photo and name to another valid form of government issued photo identification. Verify the individual's certification status by searching for Lead-Related Construction Professionals at www.cdph.ca.gov/programs/clppb or calling (800) 597-LEAD.



ANALYTICAL REPORT

Report Date: December 06, 2021

Jorge Vizcaino
Aero-Environmental Consulting
1426 Via Isola
Monterey, CA 93940

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Workorder: **34-2133803**

Client Project ID: 2108 Bering Dr #B

Purchase Order: NA

Project Manager: Stella Hanis

Analytical Results

Sample ID: 12121W1		Collected: 12/01/2021	
Lab ID: 2133803001		Received: 12/02/2021	
Sampling Location: 2108 Bering Dr #B			
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP12	
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/03/2021 (287995)	
		Analyzed: 12/06/2021 (288071)	
Analyte	Result (ug/sample)	Result (ug/100cm ²)	RL (ug/sample)
Cobalt	0.77	0.77	0.075

Sample ID: 12121W2		Collected: 12/01/2021	
Lab ID: 2133803002		Received: 12/02/2021	
Sampling Location: 2108 Bering Dr #B			
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP12	
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/03/2021 (287995)	
		Analyzed: 12/06/2021 (288071)	
Analyte	Result (ug/sample)	Result (ug/100cm ²)	RL (ug/sample)
Cobalt	2.8	2.8	0.075

Sample ID: 12121W3		Collected: 12/01/2021	
Lab ID: 2133803003		Received: 12/02/2021	
Sampling Location: 2108 Bering Dr #B			
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP12	
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/03/2021 (287995)	
		Analyzed: 12/06/2021 (288071)	
Analyte	Result (ug/sample)	Result (ug/100cm ²)	RL (ug/sample)
Cobalt	0.27	0.27	0.075



ANALYTICAL REPORT

Workorder: **34-2133803**

Client Project ID: 2108 Bering Dr #B

Purchase Order: NA

Project Manager: Stella Hanis

Analytical Results

Sample ID: 12121W4		Collected: 12/01/2021	
Lab ID: 2133803004		Received: 12/02/2021	
Sampling Location: 2108 Bering Dr #B			
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP12	
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/03/2021 (287995)	
		Analyzed: 12/06/2021 (288071)	
Analyte	Result (ug/sample)	Result (ug/100cm ²)	RL (ug/sample)
Cobalt	0.13	0.13	0.075

Sample ID: 12121W5		Collected: 12/01/2021	
Lab ID: 2133803005		Received: 12/02/2021	
Sampling Location: 2108 Bering Dr #B			
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP12	
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/03/2021 (287995)	
		Analyzed: 12/06/2021 (288071)	
Analyte	Result (ug/sample)	Result (ug/100cm ²)	RL (ug/sample)
Cobalt	3.2	3.2	0.075

Sample ID: 12121W6		Collected: 12/01/2021	
Lab ID: 2133803006		Received: 12/02/2021	
Sampling Location: 2108 Bering Dr #B			
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP12	
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/03/2021 (287995)	
		Analyzed: 12/06/2021 (288071)	
Analyte	Result (ug/sample)	Result (ug/100cm ²)	RL (ug/sample)
Cobalt	0.15	0.15	0.075

Sample ID: 12121A1		Collected: 12/01/2021	
Lab ID: 2133803007		Received: 12/02/2021	
Sampling Location: 2108 Bering Dr #B			
Method: NIOSH 7300 Mod., MCE	Media: MCE Filter	Instrument: ICP12	
Dilution: 1	Sampling Parameter: Air Volume 999 L	Prepared: 12/03/2021 (287996)	
		Analyzed: 12/06/2021 (288071)	
Analyte	Result (ug/sample)	Result (mg/m ³)	RL (ug/sample)
Cobalt	1.6	0.0016	0.075



ANALYTICAL REPORT

Workorder: **34-2133803**

Client Project ID: 2108 Bering Dr #B

Purchase Order: NA

Project Manager: Stella Hanis

Analytical Results

Sample ID: 12121A2		Collected: 12/01/2021	
Lab ID: 2133803008		Received: 12/02/2021	
Method: NIOSH 7300 Mod., MCE		Instrument: ICP12	
Dilution: 1		Prepared: 12/03/2021 (287996)	
Media: MCE Filter		Analyzed: 12/06/2021 (288071)	
Sampling Parameter: Air Volume 969 L			
Analyte	Result (ug/sample)	Result (mg/m ³)	RL (ug/sample)
Cobalt	0.17	0.00018	0.075

Sample ID: 12121A3		Collected: 12/01/2021	
Lab ID: 2133803009		Received: 12/02/2021	
Method: NIOSH 7300 Mod., MCE		Instrument: ICP12	
Dilution: 1		Prepared: 12/03/2021 (287996)	
Media: MCE Filter		Analyzed: 12/06/2021 (288071)	
Sampling Parameter: Air Volume 240 L			
Analyte	Result (ug/sample)	Result (mg/m ³)	RL (ug/sample)
Cobalt	<0.075	<0.00031	0.075

Sample ID: 12121A4		Collected: 12/01/2021	
Lab ID: 2133803010		Received: 12/02/2021	
Method: NIOSH 7300 Mod., MCE		Instrument: ICP12	
Dilution: 1		Prepared: 12/03/2021 (287996)	
Media: MCE Filter		Analyzed: 12/06/2021 (288071)	
Sampling Parameter: Air Volume 1305 L			
Analyte	Result (ug/sample)	Result (mg/m ³)	RL (ug/sample)
Cobalt	<0.075	<0.000057	0.075

Sample ID: 12121FB		Collected: 12/01/2021	
Lab ID: 2133803011		Received: 12/02/2021	
Method: NIOSH 7300 Mod., MCE		Instrument: ICP12	
Dilution: 1		Prepared: 12/03/2021 (287996)	
Media: MCE Filter		Analyzed: 12/06/2021 (288071)	
Sampling Parameter: Air Volume Not Applicable			
Analyte	Result (ug/sample)	Result (mg/m ³)	RL (ug/sample)
Cobalt	<0.075	NA	0.075

Report Authorization (/S/ is an electronic signature that complies with 21 CFR Part 11)

Method (Analysis Batch)	Analyst	Peer Review
NIOSH 7300 Mod., MCE (288071)	/S/ Rex Bagley 12/06/2021 13:44	/S/ Kristie F. Bitner 12/06/2021 14:49
NIOSH 9102 Mod, Ghost Wipe (288071)	/S/ Rex Bagley 12/06/2021 13:44	/S/ Kristie F. Bitner 12/06/2021 14:49

**ANALYTICAL REPORT**Workorder: **34-2133803**

Client Project ID: 2108 Bering Dr #B

Purchase Order: NA

Project Manager: Stella Hanis

Laboratory Contact Information

ALS Environmental
960 W Levoy Drive
Salt Lake City, Utah 84123

Phone: (801) 266-7700
Email: alslt.lab@ALSGlobal.com
Web: www.alssl.com

General Lab Comments

The results provided in this report relate only to the items tested.

Samples were received in acceptable condition unless otherwise noted.

The following was provided by the client: Sample ID, Collection Date, Sampling Location, Media Type, Sampling Parameter, Collection Date, Media Type, and Sampling Parameter can potentially affect the validity of the results.

Samples have not been blank corrected unless otherwise noted.

This test report shall not be reproduced, except in full, without written approval of ALS.

ALS provides professional analytical services for all samples submitted. ALS is not in a position to interpret the data and assumes no responsibility for the quality of the samples submitted.

All quality control samples processed with the samples in this report yielded acceptable results unless otherwise noted.

ALS is accredited for specific fields of testing (scopes) in the following testing sectors. The quality system implemented at ALS conforms to accreditation requirements and is applied to all analytical testing performed by ALS. The following table lists testing sector, accreditation body, accreditation number and website. Please contact these accrediting bodies or your ALS project manager for the current scope of accreditation that applies to your analytical testing.

Testing Sector	Accreditation Body (Standard)	Certificate Number	Website
Environmental	PJLA (DoD ELAP)	L20-57	http://www.pjlabs.com
	PJLA (ISO 17025)	L20-58	http://www.pjlabs.com
Industrial Hygiene	AIHA (ISO 17025 & AIHA IHLAP)	101574	http://www.aihaaccreditedlabs.org
	DOECAP-AP	L20-59	http://www.pjlabs.com
	Washington	C596	https://ecology.wa.gov/Regulations-Permits/Permits-certifications/Laboratory-Accreditation
Dietary Supplements	PJLA (ISO 17025)	L20-58	http://www.pjlabs.com

Definitions

LOD = Limit of Detection = MDL = Method Detection Limit, A statistical estimate of method/media/instrument sensitivity.

LOQ = Limit of Quantitation = RL = Reporting Limit, A verified value of method/media/instrument sensitivity.

ND = Not Detected, Testing result not detected above the LOD or LOQ.

NA = Not Applicable.

** No result could be reported, see sample comments for details.

< Means this testing result is less than the numerical value.

() This testing result is between the LOD and LOQ and has higher analytical uncertainty than values at or above the LOQ.



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Evaluation of Cobalt 59 Dust Exposures, Surface Contamination and Cobalt Decontamination Work Practices during interior Cobalt cleanup operations at Quantum Labs, San Jose, California

Date Inspection Conducted:	12/01/2021, 12/02/2021, and 12/04/2021
Date of Report:	12/10/2021
Assignment:	Decontamination Oversight, Air Monitoring, and Surface Contamination Evaluation during Cobalt Decontamination activities at Quantum Labs
Address of Evaluation	QUANTUM LABS- 2108 Bering Dr., Suite B, San Jose, CA
Work Performed By:	Jorge Vizcaino, CIH 9814
Aero-Environmental Project Name:	QUANTUM LABS-Cobalt Decontamination Monitoring

QUANTUM LABS
2108 BERING DR. UNIT B
SAN JOSE, CA 95131

Highlights of this Cobalt 59 Decontamination Oversight and Monitoring Evaluation

Evaluation of Cobalt 59 Dust Exposures, Surface Contamination, and Cobalt Decontamination Work Practices at Quantum Labs, San Jose, California.

On December 1st, 2nd, and 4th, 2021, Aero-Environmental Certified Industrial Hygienist (CIH 9814) Jorge Vizcaino, and Industrial Hygiene Technician David Kummer (LRC-00007343) conducted cobalt decontamination oversight and monitoring activities at Quantum Labs.

What Aero-Environmental Did

- We evaluated employee work practices.
- We collected personal and area air samples on two employees each day and two area (perimeter) air samples.



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- We collected baseline wipe samples of selected surfaces in the work areas as well as adjacent office/lab areas.
- We collected clearance wipe samples of the Warehouse Clean Room areas following decontamination of this area.
- We communicated with the Belfor Environmental project manager any issues of concern.

What We Found

- Analytical results for the baseline wipe samples indicated detectable cobalt surface concentrations in all of the samples collected, with two wipe samples exceeding the BNL "Free Release" Clearance Level of $2 \mu\text{g}/100 \text{ cm}^2$.
- Results from the perimeter area samples were all below the analytical detection limit and therefore did not indicate exposures to cobalt dust in excess of occupational criteria.
- Results from the personal air samples were both below the California Permissible Exposure Limit (PEL) of $0.02 \text{ mg}/\text{m}^3$.
- The cobalt decontamination work practices were adequate for this project, with the proper containment, critical barriers, HEPA vacuuming, wet methods, and proper waste disposal methods.
- All clearance wipe sample results were at or below the BNL "Free Release" level of $2 \mu\text{g}/100 \text{ cm}^2$ which is the maximum level allowed on accessible surfaces. Therefore this area can be set up by Belfor Environmental as their "Clean" Area or Support zone for decontamination purposes.

Abbreviations

cm^2	Square centimeter
$\mu\text{g}/100 \text{ cm}^2$	Micrograms per 100 square centimeters
mg/m^3	Milligrams per cubic meter
ABIH®	American Board of Industrial Hygienists
ACGIH®	American Conference of Governmental Industrial Hygienists
BNL	Brookhaven National Lab
CAL-OSHA	California Occupational Safety and Health Administration
CIH	Certified Industrial Hygienist
CFR	Code of Federal Regulations
CCR	California Code of Regulations
HEPA	High Efficiency Particulate Air
NIOSH	National Institute of Occupational Safety and Health



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PPE	Personal Protective Equipment
OEL	Occupational Exposure Level
PBZ	Personal Breathing Zone
ppb	Parts per billion
ppm	Parts per million
PEL	Permissible exposure limit
PPE	Personal Protective Equipment
TWA	Time-weighted average

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Summary

On December 1st, 2nd, and 4th 2021, Aero-Environmental Certified Industrial Hygienist (CIH 9814) Jorge Vizcaino, and Industrial Hygiene Technician David Kummer (LRC-00007343) conducted cobalt decontamination oversight and monitoring activities at Quantum Labs. Aero-Environmental conducted cobalt decontamination oversight and monitoring activities at Quantum Labs. Following an opening safety meeting and



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walkthrough of the decontamination areas, the industrial hygiene professionals evaluated the cobalt decontamination containment system and cobalt decontamination work practices that were going to be followed. During these two days of cobalt decontamination, air monitoring was conducted for personal and perimeter airborne cobalt dust. The cobalt decontamination containment and work practices were also evaluated and found to be satisfactory. In addition, cobalt decontamination activities and work practices were discussed with the project lead supervisor, Greg Henke.

Two perimeter (area) air samples for cobalt dust and two personal air samples were collected. The location of the perimeter samples included the negative air exhaust and the Clean Room Test Lab, adjacent to Simon Planck's office. Personal sampling was conducted on 2 employees each day for their entire work shift.

In addition, a total of six (6) surface wipe samples were collected during this initial assessment to determine a baseline level of cobalt dust concentrations inside and outside the work areas. Two of these wipe samples exceeded the BNL "Free Release" Clearance Level of $2 \mu\text{g}/100 \text{ cm}^2$.

Air sampling results indicated that exposures to cobalt dust were all below the California Permissible Exposure Limit (PEL) of $0.02 \text{ mg}/\text{m}^3$.

All clearance wipe sample results for the warehouse/clean room were at or below the BNL "Free Release" level of $2 \text{ ug}/100 \text{ cm}^2$ which is the maximum level allowed on accessible surfaces.

Introduction

In October, 2021, Aero-Environmental received request from Quantum Labs to conduct cobalt decontamination oversight and monitoring activities at Quantum Labs in San Jose, California. The request was made to ensure that the appropriate cobalt decontamination work practices were being followed, and therefore not potentially exposing workers and personnel in this industrial building or adjacent offices to Cobalt 59 dust.

On December 1st, 2nd, and 4th 2021, Aero-Environmental Certified Industrial Hygienist (CIH 9814) Jorge Vizcaino, and Industrial Hygiene Technician David Kummer (LRC-00007343) conducted cobalt decontamination oversight and monitoring activities at Quantum Labs. Following an opening safety meeting and walkthrough of the decontamination areas, the industrial hygiene professionals evaluated the cobalt



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decontamination containment system and decontamination work practices that were going to be followed. During these two days of cobalt abatement, air monitoring was conducted for personal and perimeter airborne cobalt dust. In addition, surface wipe samples were also collected of selected surfaces inside and outside the work areas.

Methods

Belfor Environmental Scope of Work consists of the following:

- Set up critical barriers and containments to isolate work areas.
- Lab pack of loose chemicals.
- Removal of Select Exhaust Systems
- Removal of specified tools owned by Maxim.
- Removal of specified pipe runs
- Decontamination of Quantum tools
- Clean Facility of Cobalt 59 contamination.

Aero-Environmental Consulting conducted the following activities:

- 1) Collection of personal and area air samples on two employees each day and two area (perimeter) air samples.
- 2) Evaluation of cobalt abatement work practices and issued comments and recommendations.
- 3) Collection of baseline surface wipe samples during the 1st day of decontamination activities.
- 4) Collection of clearance wipe samples in the Warehouse/Clean Room Area following decontamination.

TABLE 1-AIR/SURFACE SAMPLING METHODS		
Substance	Reason for Sampling	Sampling Methods
Airborne Cobalt Dust	Possible Exposure during cobalt decontamination activities	NIOSH Method 7300
Surface Cobalt Dust	Possible Exposure during cobalt decontamination activities	NIOSH Method 9102



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Evaluation Criteria

As a guide to the evaluation of the hazards posed by workplace exposures, Aero-Environmental field staff employs environmental evaluation criteria for the assessment of a number of chemical and physical agents. These criteria are intended to suggest levels of exposure to which most workers may be exposed up to 8 hours per day, 40 hours per week for a working lifetime without experiencing adverse health effects. It is, however, important to note that not all workers will be protected from adverse health effects even though their exposures are maintained below these levels. A small percentage may experience adverse health effects because of individual susceptibility, a pre-existing medical condition, and/or hypersensitivity (allergy). In addition, some hazardous substances may act in combination with other workplace exposures, the general environment, or with medications or personal habits of the worker to produce health effects even if the occupational exposures are controlled at the level set by the criterion. These combined effects are often not considered in the evaluation criteria. Also, some substances are absorbed by direct contact with the skin and mucous membranes, and thus potentially increase the overall exposure. Finally, evaluation criteria may change over the years as new information on the toxic effects of an agent become available.

The primary sources of environmental evaluation criteria for the workplace are: (1) NIOSH Recommended Exposure Limits (RELs), (2) the American Conference of Governmental Industrial Hygienists' (ACGIH®) Threshold Limit Values (TLVs®) and (3) the Division of Industrial Relations, California Occupational Safety and Health Administration (Cal/OSHA) Permissible Exposure Limits (PELs). Employers are encouraged to follow the NIOSH RELs, the ACGIH TLVs, or the Cal/OSHA PELs, whichever are the more protective criteria.

Cal/OSHA requires an employer to furnish employees a place of employment that is free from recognized hazards that are causing or are likely to cause death or serious physical harm. Thus, employers should understand that not all hazardous chemicals have specific Cal/OSHA exposure limits such as PELs and short-term exposure limits (STELs). An employer is still required by Cal/OSHA to protect their employees from hazards, even in the absence of a specific OSHA PEL.

A time-weighted average (TWA) exposure refers to the average airborne concentration of a substance during a normal 8- to 10-hour workday. Some substances have recommended STEL or ceiling values which are intended to supplement the TWA where there are recognized toxic effects from higher exposures over the short-term.



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Results

Results from the perimeter area samples were all below the analytical detection limit and therefore did not indicate exposures to cobalt dust in excess of occupational criteria.

Results from the personal air samples were both below the California Permissible Exposure Limit (PEL) of 0.02 mg/m^3 .

Analytical results for the baseline wipe samples indicated detectable cobalt surface concentrations in all of the samples collected, with two wipe samples exceeding the BNL "Free Release" Clearance Level of $2 \text{ } \mu\text{g}/100 \text{ cm}^2$.

All clearance wipe sample results for the warehouse/clean room were at or below the BNL "Free Release" level of $2 \text{ ug}/100 \text{ cm}^2$ which is the maximum level allowed on accessible surfaces.

The cobalt decontamination work practices were adequate for this project, with the proper containment, critical barriers, HEPA vacuuming, wet methods, and proper waste disposal methods.

TABLE 2-Summary of full-shift air sample results for airborne Cobalt and Surface Wipe Sample Results

Sample #/Date	Personal/Area	Concentration
12121W1-Dec 1	Warehouse Floor	$0.77 \text{ } \mu\text{g}/100\text{cm}^2$
12121W2-Dec 1	Warehouse Hood Bench	$2.8 \text{ } \mu\text{g}/100\text{cm}^2$
12121W3-Dec 1	Warehouse Floor	$0.27 \text{ } \mu\text{g}/100\text{cm}^2$
12121W4-Dec 1	Clean Room Test Lab Floor	$0.13 \text{ } \mu\text{g}/100\text{cm}^2$
12121W5-Dec 1	Bookshelf-Simon's Office	$3.2 \text{ } \mu\text{g}/100\text{cm}^2$
12121W6-Dec 1	Stock Room	$0.15 \text{ } \mu\text{g}/100\text{cm}^2$
12121A1-Dec 1	Personal-Aaron Davis	0.0016 mg/m^3
12121A2-Dec 1	Personal-Nestor Escobar	0.00018 mg/m^3
12121A3-Dec 1	Area-Negative Air	$<0.00031 \text{ mg/m}^3$



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	Exhaust	
12121A4-Dec 1	Area-Clean Room Test Lab	<0.000057 mg/m ³
1221-A1-Dec 2	Perimeter-Negative Air Exhaust	<0.34 mg/m ³
1221-A2-Dec 2	Perimeter-Office	<0.37 mg/m ³
12221 A3-Dec 2	Personal-Mario Garza	<0.45 mg/m ³
12221 A4-Dec 2	Personal-Kristen Davis	<0.48 mg/m ³
12121FB-Dec 1	Field Blank	NA
12-4-W1-Dec 4	Warehouse Floor	0.52 µg/100cm ²
12-4-W2-Dec 4	Warehouse Floor	0.25 µg/100cm ²
12-4-W3-Dec 4	Warehouse Floor	<0.075 µg/100cm ²
12-4-W4-Dec 4	Horizontal Equipment Surface	0.94 µg/100cm ²
12-4-W5-Dec 4	Horizontal Hood Bench Surface	1.2 µg/100cm ²
12-4-W6-Dec 4	Horizontal Equipment Surface	0.10 µg/100cm ²
12-4-W7-Dec 4	Equipment Storage Barrel Lid	2.0 µg/100cm ²
12-4-W8-Dec 4	Vertical Door Frame	0.17 µg/100cm ²
12-4-W9-Dec 4	Equipment Cabinet Roof	0.42 µg/100cm ²
12-4-W10-Dec 4	Equipment Cabinet Roof	0.53 µg/100cm ²
12-4-FB-Dec 4	Field Blank	NA

Conclusions and Recommendations

This cobalt dust evaluation indicated that all air sampling results for airborne cobalt dust were below applicable occupational exposure criteria and did not indicate an airborne



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hazard to the decontamination workers. The California PEL is 0.02 mg/m³ for airborne cobalt dust.

However, this dust evaluation did indicate widespread cobalt dust contamination in different surfaces inside and outside the work area, with BNL elevated levels inside Simon Planck's office. Therefore the entire office area, including Simon's office, Engineering Room, Lobby, Break Room, Restrooms, Clean Room Test Lab, Stock Room and Conference Room should be isolated as a decontamination zone. All carpeted office areas should have the carpet removed and discarded as hazardous waste as this material is extremely porous and is a potential source of cobalt contamination.

All clearance wipe sample results for the warehouse/clean room were at or below the BNL "Free Release" level of 2 ug/100 cm² which is the maximum level allowed on accessible surfaces. Therefore this area can be set up as the Clean "Support" Zone for Belfor Environmental

This report serves as a weekly monitoring assessment report for this decontamination project at Quantum Labs.

Availability of Report/Disclaimer

The recommendations in this report are made on the basis of the findings at the workplace evaluated and may not be applicable to other workplaces. This report was prepared by Jorge Vizcaino, CIH/CHMM with Aero-Environmental Consulting, INC. Analytical support was provided by AIHA Accredited Laboratory ALS Environmental in Salt Lake City, Utah.

Sincerely,
Aero-Environmental Consulting, INC

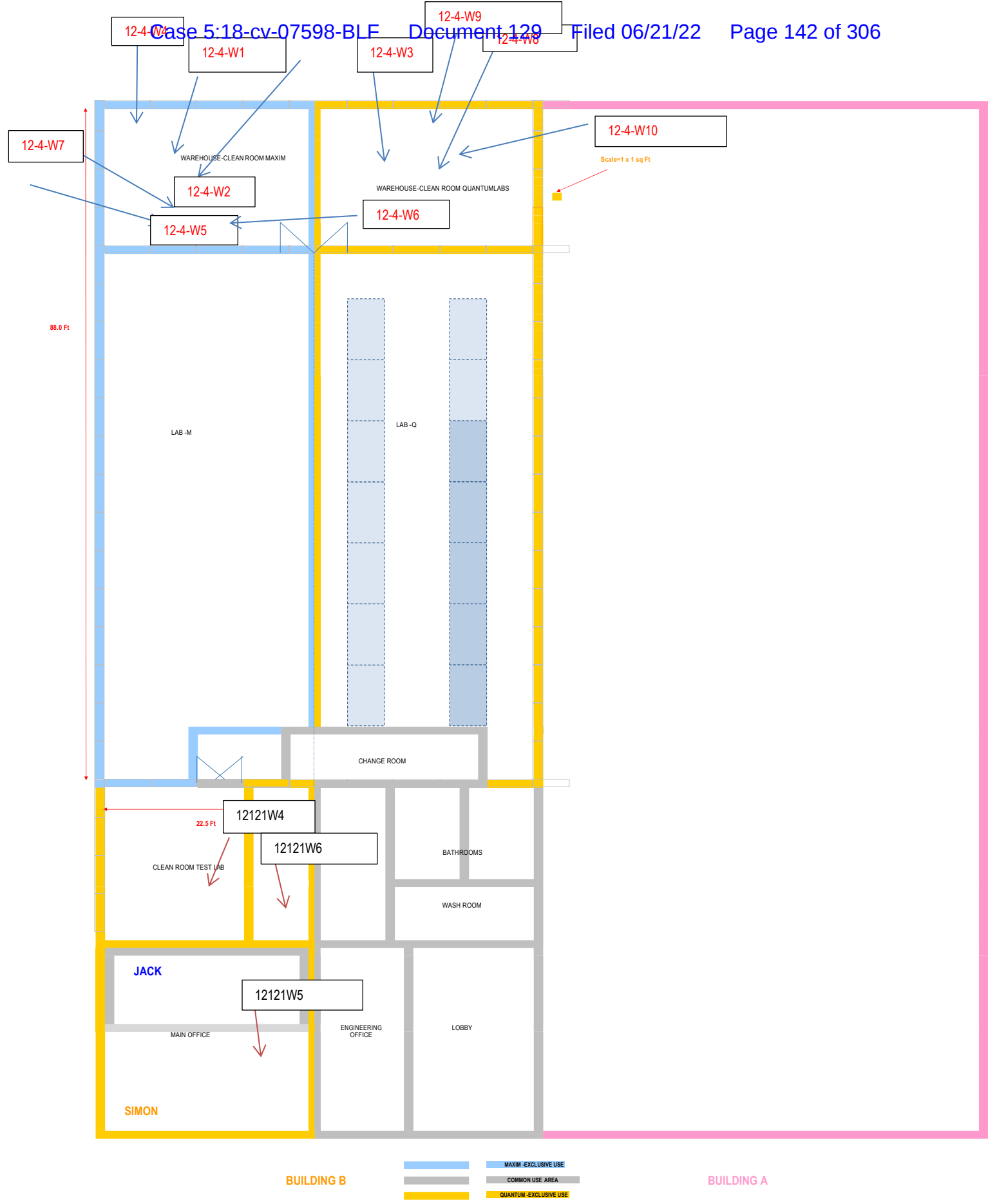
Jorge Vizcaino
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FIGURE 1 AND 2-FLOOR PLANS WITH WIPE SAMPLING LOCATIONS





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APPENDIX A-FIELD DOCUMENTATION

AIR SAMPLING DATA SHEET

Sample Date:	Sample Number:	Sample Mfg/Model# Media Type	Sample Type (pers. area, blank):	Media ID:	Media Lot #
12/1/21	1212149	0.5 μ m MCE	Area		

Wind Speed (mph):

Wind Direction:

Relative Humidity (%):

Ambient Temperature:

F

Employee Name:	Area - Simon's Office
Employee Job Class	
Work Location	COMPLEX/BUILDING: Cleanroom / Test Lab / Simon's office

WORK CONDITIONS

Activity Monitored (Work descriptions, tasks, and task times):	
Process: <u>Decontamination</u>	Associated Materials (solvents, etc.): <u>Cobalt</u>
Ventilation Conditions/Special Conditions (hood use, local exhaust, etc.):	
Hood# _____	
PPE Used (Respirator type, suit, gloves, boots, etc.): <u>Full Face, M-level C</u>	
Exposure Task Frequency (circle): Daily Weekly Monthly Other (Specify):	

CALIBRATION DATA

Sampling Pump Mfg & Model:	Flow Rate	Units	Sample Start Time:
1			0852
Sampling Pump Serial No.:	*Start:		Sample End Time:
	3	L/min	1607
Calibration Method (Rotameter, Giliibrator):	*End:		Duration:
Rotameter	3	L/min	435 minutes
Calibration Date:	Ave.:		Volume:
12/1/21	3	L/min	1305 liters

*Must be within 10% for sample to be valid

Calibrator Mfg. & Model:	Calibrator Serial No.:	Annual Calibration Date:

ANALYSIS RESULTS

Substance	Concentration & Units	Exposure Limit & Originator
Cobalt	50000 μ g/m ³	Area

Analytical Method & Source:

Analytical Laboratory:

Collected by:	Date:	Calculated by:	Date:	Checked by:	Date:

INCLUDE ADDITIONAL COMMENTS AND ON BACKSIDE OF FORM
ATTACH CALIBRATION RECORDS AND ANALYSIS REPORT FROM LABORATORY

AIR SAMPLING DATA SHEET

Sample Date:	Sample Number:	Sample Mfg/Model# Media Type	Sample Type (pers, area, blank):	Media ID:	Media Lot #
12/1/21	12/21A3	0.8 um MCE	Area		

Wind Speed (mph):

Wind Direction:

Relative Humidity (%):

Ambient Temperature:

F

Employee Name:	Area		EID:
Employee Job Class			DEPT:
Work Location	COMPLEX/BUILDING:	2100 Perry Dr H0	UNIT/AREA: Negative Air Exhaust

WORK CONDITIONS

Activity Monitored (Work descriptions, tasks, and task times):	
Process: <u>Restroom</u>	Associated Materials (solvents, etc.): <u>Cobalt / Simple Green</u>
Ventilation Conditions/Special Conditions (hood use, local exhaust, etc.):	
Hood# _____	
PPE Used (Respirator type, suit, gloves, boots, etc.): <u>PAPR, Level C</u>	
Exposure Task Frequency (circle): Daily Weekly Monthly Other (Specify):	

CALIBRATION DATA

Sampling Pump Mfg & Model:	Flow Rate	Units	Sample Start Time:
5			8:45 / 8:55
Sampling Pump Serial No.:	*Start:		Sample End Time:
2400126	5	l/min	1:55
Calibration Method (Rotameter, Gilibrator):	*End:		Duration: minutes
Rotameter	3	l/min	
Calibration Date:	Ave.:		Volume: liters
12-1-21	3	l/min	240

*Must be within 10% for sample to be valid

Calibrator Mfg. & Model:	Calibrator Serial No.:	Annual Calibration Date:

ANALYSIS RESULTS

Substance	Concentration & Units	Exposure Limit & Originator
Cobalt	20000 mg/m ³	12 hr sample

Analytical Method & Source:

Analytical Laboratory:

Collected by:	Date:	Calculated by:	Date:	Checked by:	Date:

INCLUDE ADDITIONAL COMMENTS AND ON BACKSIDE OF FORM
ATTACH CALIBRATION RECORDS AND ANALYSIS REPORT FROM LABORATORY

AIR SAMPLING DATA SHEET

Sample Date:	Sample Number:	Sample Mfg/Model# Media Type	Sample Type (pers. area, blank):	Media ID:	Media Lot #
12/1/21	12121A2	0.2 um nice	Pers		

Wind Speed (mph):

Wind Direction:

Relative Humidity (%):

Ambient Temperature:

F

Employee Name:	Nestor Escobar		EID:
Employee Job Class	Decon Tech		DEPT:
Work Location	COMPLEX/BUILDING:	UNIT/AREA:	
	1108 Perry Dr #10	F-6/L-6 Area	

WORK CONDITIONS

Activity Monitored (Work descriptions, tasks, and task times):	
Process: Decon	Associated Materials (solvents, etc.): Cobalt, Simple Green
Ventilation Conditions/Special Conditions (hood use, local exhaust, etc.):	
Hood#	
PPE Used (Respirator type, suit, gloves, boots, etc.): RANR, Tyvek, gloves, boots	
Exposure Task Frequency (circle): Daily Weekly Monthly Other (Specify):	

CALIBRATION DATA

Sampling Pump Mfg & Model:	Flow Rate	Units	Sample Start Time:
4			0833 / 1520
Sampling Pump Serial No.:	*Start:		Sample End Time:
	3	L/min	1130 / 1546
Calibration Method (Rotameter, Gilibrator):	*End:		Duration:
Rotameter	3	L/min	5hr
Calibration Date:	Ave.:		minutes
12/1/21	3	L/min	23
			Volume: 969 liters

*Must be within 10% for sample to be valid

Calibrator Mfg. & Model:	Calibrator Serial No.:	Annual Calibration Date:

257
226
5:23

ANALYSIS RESULTS

Substance	Concentration & Units	Exposure Limit & Originator
Cobalt	0.00018 mg/m ³	PEL 0.02 mg/m ³

Analytical Method & Source:

Analytical Laboratory:

Collected by:	Date:	Calculated by:	Date:	Checked by:	Date:

INCLUDE ADDITIONAL COMMENTS AND ON BACKSIDE OF FORM
ATTACH CALIBRATION RECORDS AND ANALYSIS REPORT FROM LABORATORY

AIR SAMPLING DATA SHEET

Sample Date:	Sample Number:	Sample Mfg/Model# Media Type	Sample Type (pers. area, blank):	Media ID:	Media Lot #
12/1/21	12121A1	0.8 MCE	Pers		

Wind Speed (mph):

Wind Direction:

Relative Humidity (%):

Ambient Temperature:

F

Employee Name:	Decon	EID:
Employee Job Class	technician	DEPT:
Work Location	2100 Berry Dr #10	UNIT/AREA: Fab/Edo

WORK CONDITIONS

Activity Monitored (Work descriptions, tasks, and task times):	
Process: Decon	Associated Materials (solvents, etc.): Cobalt, Sample Green
Ventilation Conditions/Special Conditions (hood use, local exhaust, etc.):	
Hood#	
PPE Used (Respirator type, suit, gloves, boots, etc.): PAPP, 7-year, gloves, boots	
Exposure Task Frequency (circle): Daily Weekly Monthly Other (Specify):	

CALIBRATION DATA

Sampling Pump Mfg & Model:	Flow Rate	Units	Sample Start Time:
2			0828 1318
Sampling Pump Serial No.:	*Start:		Sample End Time:
	3L/min		1129 1550
Calibration Method (Rotameter, Gilibrator):	*End:		Duration:
Rotameter	3L/min		5 min
Calibration Date:	Ave.:		Volume:
12/1/21	3L/min		999 liters
*Must be within 10% for sample to be valid			
Calibrator Mfg. & Model:	Calibrator Serial No.:	Annual Calibration Date:	

3 hr 1
2 hr 32

ANALYSIS RESULTS

Substance	Concentration & Units	Exposure Limit & Originator
Cobalt	0.006 mg/m ³	PEL 0.006 mg/m ³
		20 mg/m ³

Analytical Method & Source:

Analytical Laboratory:

Collected by:	Date:	Calculated by:	Date:	Checked by:	Date:
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INCLUDE ADDITIONAL COMMENTS AND ON BACKSIDE OF FORM
ATTACH CALIBRATION RECORDS AND ANALYSIS REPORT FROM LABORATORY

AIR SAMPLING DATA SHEET

Sample Date:	Sample Number:	Sample Mfg/Model# Media Type	Sample Type (pers. area, blank):	Media ID:	Media Lot #
12-2-2021	12221-A1		AREA PERIMETER		

Wind Speed (mph): Wind Direction: Relative Humidity (%): Ambient Temperature: F

Employee Name:	EID:
Employee Job Class	DEPT:
Work Location	COMPLEX/BUILDING: 2108 BERING DR. SAN JOSE, CA. UNIT/AREA: AT NEG. AIR EXHAUST

WORK CONDITIONS

Activity Monitored (Work descriptions, tasks, and task times):

Process: Associated Materials (solvents, etc.):

Ventilation Conditions/Special Conditions (hood use, local exhaust, etc.):

Hood#:

PPE Used (Respirator type, suit, gloves, boots, etc.):

Exposure Task Frequency (circle): Daily Weekly Monthly Other (Specify):

CALIBRATION DATA

Sampling Pump Mfg & Model:	Flow Rate	Units	Sample Start Time:
			8AM
Sampling Pump Serial No.:	*Start:		Sample End Time:
	3.06L		
Calibration Method (Rotameter, Gilibrator):	*End:		Duration: 483 minutes
Rotameter	3.06L		
Calibration Date:	Ave.:		Volume: 1,477.98liters
12-2-21	3.06L		

*Must be within 10% for sample to be valid

Calibrator Mfg. & Model:	Calibrator Serial No.:	Annual Calibration Date:

ANALYSIS RESULTS

Substance	Concentration & Units	Exposure Limit & Originator
Cobalt	20.37mg/m ³	

Analytical Method & Source:

Analytical Laboratory:

Collected by:	Date:	Calculated by:	Date:	Checked by:	Date:

INCLUDE ADDITIONAL COMMENTS AND ON BACKSIDE OF FORM
ATTACH CALIBRATION RECORDS AND ANALYSIS REPORT FROM LABORATORY

AIR SAMPLING DATA SHEET

Sample Date:	Sample Number:	Sample Mfg/Model# Media Type	Sample Type (pers, area, blank):	Media ID:	Media Lot #
12-2-21	12221 - A2		AREA PERIMETER		

Wind Speed (mph): 0

Wind Direction:

Relative Humidity (%):

Ambient Temperature:

F

Employee Name:	EID:
Employee Job Class	DEPT:
Work Location	COMPLEX/BUILDING: 2108 BERING DR. SAN JOSE, CA. UNIT/AREA: OFFICE

WORK CONDITIONS

Activity Monitored (Work descriptions, tasks, and task times):
Process: _____ Associated Materials (solvents, etc.): _____
Ventilation Conditions/Special Conditions (hood use, local exhaust, etc.):
Hood# _____
PPE Used (Respirator type, suit, gloves, boots, etc.):
Exposure Task Frequency (circle): Daily Weekly Monthly Other (Specify):

CALIBRATION DATA

Sampling Pump Mfg & Model:	Flow Rate	Units	Sample Start Time:
Sampling Pump Serial No.:	*Start:		8:10 AM
Calibration Method (Rotameter, Gilibrator):	3.06 L		Sample End Time:
Calibration Date:	*End:		3:31 PM
12-2-21	3.06 L		Duration: 441 minutes
	Ave:		Volume: 1,349.46 liters
	3.06 L		

*Must be within 10% for sample to be valid

Calibrator Mfg. & Model:	Calibrator Serial No.:	Annual Calibration Date:
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ANALYSIS RESULTS

Substance	Concentration & Units	Exposure Limit & Originator
Cobalt	0.037 mg/m ³	

Analytical Method & Source:

Analytical Laboratory:

Collected by:	Date:	Calculated by:	Date:	Checked by:	Date:
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INCLUDE ADDITIONAL COMMENTS AND ON BACKSIDE OF FORM
ATTACH CALIBRATION RECORDS AND ANALYSIS REPORT FROM LABORATORY

AIR SAMPLING DATA SHEET

Sample Date:	Sample Number:	Sample Mfg/Model# Media Type	Sample Type (pers, area, blank):	Media ID:	Media Lot #
12-2-21	12221-A3	37MM/0.8µm MCE	PERSONAL		

Wind Speed (mph): 0MPH Wind Direction: CALM Relative Humidity (%): Ambient Temperature: F

Employee Name:	<u>MARIO GARZA</u>		EID:
Employee Job Class			DEPT:
Work Location	COMPLEX/BUILDING: <u>2108 BERING DR. SANJOSE, CA</u> UNIT/AREA: <u>QUANTUM LABS</u>		

WORK CONDITIONS

Activity Monitored (Work descriptions, tasks, and task times):

Process CLEANING LAB TOOLS Associated Materials (solvents, etc.) SIMPLE GREEN & WATER

Ventilation Conditions/Special Conditions (hood use, local exhaust, etc.):

Hood#

PPE Used (Respirator type, suit, gloves, boots, etc.):

PAPR, CHEM SUIT, RUBBER GLOVES & WORK BOOTS

Exposure Task Frequency (circle): Daily Weekly Monthly Other (Specify):

CALIBRATION DATA

Sampling Pump Mfg & Model:	Flow Rate	Units	Sample Start Time:
<u>GILIAN BDXII</u>			<u>7:38AM</u>
Sampling Pump Serial No.:	*Start:		Sample End Time:
<u>20150607047</u>	<u>3.06L</u>		<u>4:05 PM</u>
Calibration Method (Rotameter, Gilibrator):	*End:		Duration: <u>366</u> minutes
<u>Rotameter</u>	<u>3.06L</u>		Volume: <u>1,119.96L</u>
Calibration Date:	Ave.:		
<u>12-2-21</u>	<u>3.06L</u>		

*Must be within 10% for sample to be valid

Calibrator Mfg. & Model:	Calibrator Serial No.:	Annual Calibration Date:

ANALYSIS RESULTS

Substance	Concentration & Units	Exposure Limit & Originator
<u>Cobalt</u>	<u>20.45 mg/m³</u>	<u>PEL</u> <u>0.02 mg/m³</u>

Analytical Method & Source:

Analytical Laboratory:

Collected by:	Date:	Calculated by:	Date:	Checked by:	Date:

INCLUDE ADDITIONAL COMMENTS AND ON BACKSIDE OF FORM
ATTACH CALIBRATION RECORDS AND ANALYSIS REPORT FROM LABORATORY

AIR SAMPLING DATA SHEET

Sample Date:	Sample Number:	Sample Mfg/Model# Media Type	Sample Type (pers, area, blank):	Media ID:	Media Lot #
12-2-21	12221-A4	31mm/0.8mm mce	PERSONAL		

Wind Speed (mph): 0MPH
CACM Wind Direction: Relative Humidity (%): Ambient Temperature: F

Employee Name:	KRISTEN DAVIS	EID:
Employee Job Class		DEPT:
Work Location	COMPLEX/BUILDING: 2108 BERING DR, SAN JOSE, CA. AREA: QUANTUM LABS	

WORK CONDITIONS

Activity Monitored (Work descriptions, tasks, and task times):

Process: CLEAN LAB TOOLS Associated Materials (solvents, etc.): SIMPLE GREEN & WATER

Ventilation Conditions/Special Conditions (hood use, local exhaust, etc.):

Hood# _____

PPE Used (Respirator type, suit, gloves, boots, etc.):

PAPR, CHEM. SUIT, RUBBER GLOVES & WORK BOOTS

Exposure Task Frequency (circle): Daily Weekly Monthly Other (Specify):

CALIBRATION DATA

Sampling Pump Mfg & Model:	Flow Rate	Units	Sample Start Time:
GILIAN BDX II			8:03 AM
Sampling Pump Serial No.:	*Start:		Sample End Time:
20120202024	3.06L		4:07 PM
Calibration Method (Rotameter, Gilibrator):	*End:		Duration: 340 minutes
Rotameter	3.06L		Volume: 1,040.40 liters
Calibration Date:	Ave.:		
12-2-1	3.06L		

*Must be within 10% for sample to be valid

Calibrator Mfg. & Model:	Calibrator Serial No.:	Annual Calibration Date:

ANALYSIS RESULTS

Substance	Concentration & Units	Exposure Limit & Originator
Coalt	20.40 mg/m ³	PEL 0.02 mg/m ³

Analytical Method & Source:

Analytical Laboratory:

Collected by:	Date:	Calculated by:	Date:	Checked by:	Date:

INCLUDE ADDITIONAL COMMENTS AND ON BACKSIDE OF FORM
ATTACH CALIBRATION RECORDS AND ANALYSIS REPORT FROM LABORATORY

AERO ENVIRONMENTAL CONSULTING, INC

DAILY OBSERVATION LOG

Client: _____	Project _____	Date: <u>12/2/21</u>
Contractor: _____	Location: <u>2108 Bering Dr. in San Jose, Ca</u>	
AEC Project: _____	Work Area: _____	Page <u>1</u> of <u>2</u>
AEC Rep.: <u>David Kummer</u>		

SCHEDULE		
Estimated % complete _____	Plus _____ (days/weeks)	Minus _____ (days/weeks)

NOTICES ISSUED (check each)	
<u>Pre-Abatement Visual</u> _____ pass _____ fail	<u>Pre-Clearance Visual</u> _____ pass _____ fail
<u>Pre-Encapsulation Visual</u> _____ pass _____ fail	<u>Pre-Clearance Monitoring</u> _____ pass _____ fail

TESTING					
TYPE LEGEND:		TYPE	NO.	F/CC	%
1) Survey	2) 7) Clearance / outside	9)	10)	11)	12)
Outside / Ambient	3) 8) Clearance retest / in				
Baseline / Bkgd.	4) Clearance retest / out				
Work Area / inside	5) Personal sample				
Work Area / outside	6) Blank				
Clearance / inside					

OBSERVATION CHECKLIST									
WORK ITEMS	PASS	FAIL	N/A	CORR	WORK ITEMS	PASS	FAIL	N/A	CORR
If initialed-explain on pg 2					If initialed-explain on pg 2				
Barriers/Isolation/Containment					Emergency lights-Temp. power				
Decontamination system					Worker Protection				
Power Shut Down-Locked out					Proper Procedures				
HVAC shut down-sealed					Waste-packaging/labeling/stor				
Adequate negative pressure					Product equip. verification				
Proper signage posted					Product storage conditions				
Emergency exits clear					Replacement materials installed				
Fire Extinguishers					Air Monitoring				
Work Area Cleanliness					Other				
Work practices									

OBSERVATION LOG NOTES
<p>Thursday, December 2, 2021. Location 2108 Bering Dr. in San Jose, California. Start time 7 AM. Belfore has a crew of blank workers with Johnny Lubuw as lead man and Greg Henke as foreman. Belfore starts by having a safety meeting and go over the scope of the day. During cleaning AERO Environmental will set up personal air samples on two workers and also set up two perimeter air samples one is located at the exhaust of the negative air machines and the other one is in the big office in Suite B. The Belfore cleaning crew is using chemical resistant suit, PAPR's, work boots, and rubber gloves. First the crew will HEPA vacuum an area and then wet wipe it with simple green and water. Approximately 10:30 AM Belfore crew breaks for lunch. Approximately 12 PM crew returns from lunch and goes back to work. 12:15 PM crew removes some ducting from the building and loads it in 20 yard container. 2 PM Belfore crew comes out for a break. 2:30 PM crew is getting suited up to go back inside. Spoke with Jonny he said that they have finished cleaning the polisher and lapper equipment in the warehouse area. All day there has been no wind, weather</p>

DAILY OBSERVATION LOG

Client: _____	Project _____	Date: _____
Contractor: _____	Location: _____	
AEC Project: _____		
AEC Rep.: _____	Work Area: _____	Page _____ of _____

OBSERVATION LOG NOTES cont'd.

conditions are calm. Approximately 4 PM the crew comes out of containment area and will secure job site before leaving. At this time AERO environmental will collect personal air samples and leave site at approximately 430 p.m.

NAME (PRINT): David Kummer	SIGNATURE: <i>David Kummer</i>
TITLE: CSST	DATE: 11/22/2021



831.394.1199 E-Mail: Jorge@aero-enviro.com www.Aero-Enviro.com

APPENDIX B-Analytical Results

**ANALYTICAL REPORT****Amended-20211207**

Report Date: December 07, 2021

Jorge Vizcaino
Aero-Environmental Consulting
1426 Via Isola
Monterey, CA 93940

Phone: (831) 277-5831

E-mail: jorge@aero-enviro.com

Workorder: **34-2133803**

Client Project ID: 2108 Bering Dr #B

Purchase Order: NA

Project Manager: Stella Hanis

Analytical Results

Sample ID: 12121W1-Warehouse Floor		Collected: 12/01/2021	
Lab ID: 2133803001		Received: 12/02/2021	
Method: NIOSH 9102 Mod, Ghost Wipe		Media: Ghost Wipe	
Dilution: 1		Instrument: ICP12	
Sampling Parameter: Area 100 cm ²		Prepared: 12/03/2021 (287995)	
		Analyzed: 12/06/2021 (288071)	
Analyte	Result (ug/sample)	Result (ug/100cm ²)	RL (ug/sample)
Cobalt	0.77	0.77	0.075

Sample ID: 12121W2-Warehouse Elevated Horizontal Surface		Collected: 12/01/2021	
Lab ID: 2133803002		Received: 12/02/2021	
Method: NIOSH 9102 Mod, Ghost Wipe		Media: Ghost Wipe	
Dilution: 1		Instrument: ICP12	
Sampling Parameter: Area 100 cm ²		Prepared: 12/03/2021 (287995)	
		Analyzed: 12/06/2021 (288071)	
Analyte	Result (ug/sample)	Result (ug/100cm ²)	RL (ug/sample)
Cobalt	2.8	2.8	0.075

Sample ID: 12121W3-Warehouse Floor		Collected: 12/01/2021	
Lab ID: 2133803003		Received: 12/02/2021	
Method: NIOSH 9102 Mod, Ghost Wipe		Media: Ghost Wipe	
Dilution: 1		Instrument: ICP12	
Sampling Parameter: Area 100 cm ²		Prepared: 12/03/2021 (287995)	
		Analyzed: 12/06/2021 (288071)	
Analyte	Result (ug/sample)	Result (ug/100cm ²)	RL (ug/sample)
Cobalt	0.27	0.27	0.075



ANALYTICAL REPORT

Amended-20211207

Workorder: **34-2133803**

Client Project ID: 2108 Bering Dr #B

Purchase Order: NA

Project Manager: Stella Hanis

Analytical Results

Sample ID: 12121W4-Clean Room Test Lab Floor			Collected: 12/01/2021
Lab ID: 2133803004	Sampling Location: 2108 Bering Dr #B		Received: 12/02/2021
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP12	
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/03/2021 (287995)	
		Analyzed: 12/06/2021 (288071)	
Analyte	Result (ug/sample)	Result (ug/100cm ²)	RL (ug/sample)
Cobalt	0.13	0.13	0.075

Sample ID: 12121W5-Book Shelf-Simon's Office			Collected: 12/01/2021
Lab ID: 2133803005	Sampling Location: 2108 Bering Dr #B		Received: 12/02/2021
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP12	
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/03/2021 (287995)	
		Analyzed: 12/06/2021 (288071)	
Analyte	Result (ug/sample)	Result (ug/100cm ²)	RL (ug/sample)
Cobalt	3.2	3.2	0.075

Sample ID: 12121W6-Stock Room			Collected: 12/01/2021
Lab ID: 2133803006	Sampling Location: 2108 Bering Dr #B		Received: 12/02/2021
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP12	
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/03/2021 (287995)	
		Analyzed: 12/06/2021 (288071)	
Analyte	Result (ug/sample)	Result (ug/100cm ²)	RL (ug/sample)
Cobalt	0.15	0.15	0.075

Sample ID: 12121A1			Collected: 12/01/2021
Lab ID: 2133803007	Sampling Location: 2108 Bering Dr #B		Received: 12/02/2021
Method: NIOSH 7300 Mod., MCE	Media: MCE Filter	Instrument: ICP12	
Dilution: 1	Sampling Parameter: Air Volume 999 L	Prepared: 12/03/2021 (287996)	
		Analyzed: 12/06/2021 (288071)	
Analyte	Result (ug/sample)	Result (mg/m ³)	RL (ug/sample)
Cobalt	1.6	0.0016	0.075



ANALYTICAL REPORT

Amended-20211207

Workorder: **34-2133803**

Client Project ID: 2108 Bering Dr #B

Purchase Order: NA

Project Manager: Stella Hanis

Analytical Results

Sample ID: 12121A2		Collected: 12/01/2021	
Lab ID: 2133803008		Received: 12/02/2021	
Method: NIOSH 7300 Mod., MCE		Instrument: ICP12	
Dilution: 1		Prepared: 12/03/2021 (287996)	
Media: MCE Filter		Analyzed: 12/06/2021 (288071)	
Sampling Parameter: Air Volume 969 L			
Analyte	Result (ug/sample)	Result (mg/m ³)	RL (ug/sample)
Cobalt	0.17	0.00018	0.075

Sample ID: 12121A3		Collected: 12/01/2021	
Lab ID: 2133803009		Received: 12/02/2021	
Method: NIOSH 7300 Mod., MCE		Instrument: ICP12	
Dilution: 1		Prepared: 12/03/2021 (287996)	
Media: MCE Filter		Analyzed: 12/06/2021 (288071)	
Sampling Parameter: Air Volume 240 L			
Analyte	Result (ug/sample)	Result (mg/m ³)	RL (ug/sample)
Cobalt	<0.075	<0.00031	0.075

Sample ID: 12121A4		Collected: 12/01/2021	
Lab ID: 2133803010		Received: 12/02/2021	
Method: NIOSH 7300 Mod., MCE		Instrument: ICP12	
Dilution: 1		Prepared: 12/03/2021 (287996)	
Media: MCE Filter		Analyzed: 12/06/2021 (288071)	
Sampling Parameter: Air Volume 1305 L			
Analyte	Result (ug/sample)	Result (mg/m ³)	RL (ug/sample)
Cobalt	<0.075	<0.000057	0.075

Sample ID: 12121FB		Collected: 12/01/2021	
Lab ID: 2133803011		Received: 12/02/2021	
Method: NIOSH 7300 Mod., MCE		Instrument: ICP12	
Dilution: 1		Prepared: 12/03/2021 (287996)	
Media: MCE Filter		Analyzed: 12/06/2021 (288071)	
Sampling Parameter: Air Volume Not Applicable			
Analyte	Result (ug/sample)	Result (mg/m ³)	RL (ug/sample)
Cobalt	<0.075	NA	0.075

Comments

Workorder: 2133803

Amended(12/07/2021): Update Sample IDs with locations

Report Authorization (/S/ is an electronic signature that complies with 21 CFR Part 11)

Method (Analysis Batch)	Analyst	Peer Review
NIOSH 7300 Mod., MCE (288071)	/S/ Rex Bagley 12/06/2021 13:44	/S/ Kristie F. Bitner 12/06/2021 14:49

**ANALYTICAL REPORT****Amended-20211207**Workorder: **34-2133803**

Client Project ID: 2108 Bering Dr #B

Purchase Order: NA

Project Manager: Stella Hanis

Report Authorization (/S/ is an electronic signature that complies with 21 CFR Part 11)

Method (Analysis Batch)	Analyst	Peer Review
NIOSH 9102 Mod, Ghost Wipe (288071)	/S/ Rex Bagley 12/06/2021 13:44	/S/ Kristie F. Bitner 12/06/2021 14:49

Laboratory Contact Information

ALS Environmental
960 W Levoy Drive
Salt Lake City, Utah 84123

Phone: (801) 266-7700
Email: als@alstglobal.com
Web: www.alssl.com

General Lab Comments

The results provided in this report relate only to the items tested.

Samples were received in acceptable condition unless otherwise noted.

The following was provided by the client: Sample ID, Collection Date, Sampling Location, Media Type, Sampling Parameter.

Collection Date, Media Type, and Sampling Parameter can potentially affect the validity of the results.

Samples have not been blank corrected unless otherwise noted.

This test report shall not be reproduced, except in full, without written approval of ALS.

ALS provides professional analytical services for all samples submitted. ALS is not in a position to interpret the data and assumes no responsibility for the quality of the samples submitted.

All quality control samples processed with the samples in this report yielded acceptable results unless otherwise noted.

ALS is accredited for specific fields of testing (scopes) in the following testing sectors. The quality system implemented at ALS conforms to accreditation requirements and is applied to all analytical testing performed by ALS. The following table lists testing sector, accreditation body, accreditation number and website. Please contact these accrediting bodies or your ALS project manager for the current scope of accreditation that applies to your analytical testing.

Testing Sector	Accreditation Body (Standard)	Certificate Number	Website
Environmental	PJLA (DoD ELAP)	L20-57	http://www.pjllabs.com
	PJLA (ISO 17025)	L20-58	http://www.pjllabs.com
Industrial Hygiene	AIHA (ISO 17025 & AIHA IHLAP)	101574	http://www.aihaaccreditedlabs.org
	DOECAP-AP	L20-59	http://www.pjllabs.com
	Washington	C596	https://ecology.wa.gov/Regulations-Permits/Permits-certifications/Laboratory-Accreditation
Dietary Supplements	PJLA (ISO 17025)	L20-58	http://www.pjllabs.com

Definitions

LOD = Limit of Detection = MDL = Method Detection Limit, A statistical estimate of method/media/instrument sensitivity.

LOQ = Limit of Quantitation = RL = Reporting Limit, A verified value of method/media/instrument sensitivity.

ND = Not Detected, Testing result not detected above the LOD or LOQ.

NA = Not Applicable.

** No result could be reported, see sample comments for details.

< Means this testing result is less than the numerical value.

() This testing result is between the LOD and LOQ and has higher analytical uncertainty than values at or above the LOQ.



ANALYTICAL REPORT

Report Date: December 07, 2021

Jorge Vizcaino
Aero-Environmental Consulting
1426 Via Isola
Monterey, CA 93940

Phone: (831) 277-5831

E-mail: jorge@aero-enviro.com

Workorder: **34-2134131**

Client Project ID: 2108 Bering Dr Ste B

Purchase Order: NA

Project Manager: Stella Hanis

Analytical Results

Sample ID: 12-4-W1		Collected: 12/04/2021	
Lab ID: 2134131001		Received: 12/07/2021	
Sampling Location: 2108 Bering Dr Ste B			
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP13	
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/07/2021 (288132)	
		Analyzed: 12/07/2021 (288145)	
Analyte	Result (ug/sample)	Result (ug/100cm ²)	RL (ug/sample)
Cobalt	0.52	0.52	0.075

Sample ID: 12-4-W2		Collected: 12/04/2021	
Lab ID: 2134131002		Received: 12/07/2021	
Sampling Location: 2108 Bering Dr Ste B			
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP13	
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/07/2021 (288132)	
		Analyzed: 12/07/2021 (288145)	
Analyte	Result (ug/sample)	Result (ug/100cm ²)	RL (ug/sample)
Cobalt	0.25	0.25	0.075

Sample ID: 12-4-W3		Collected: 12/04/2021	
Lab ID: 2134131003		Received: 12/07/2021	
Sampling Location: 2108 Bering Dr Ste B			
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP13	
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/07/2021 (288132)	
		Analyzed: 12/07/2021 (288145)	
Analyte	Result (ug/sample)	Result (ug/100cm ²)	RL (ug/sample)
Cobalt	<0.075	<0.075	0.075



ANALYTICAL REPORT

Workorder: **34-2134131**

Client Project ID: 2108 Bering Dr Ste B

Purchase Order: NA

Project Manager: Stella Hanis

Analytical Results

Sample ID: 12-4-W4		Collected: 12/04/2021	
Lab ID: 2134131004		Received: 12/07/2021	
Method: NIOSH 9102 Mod, Ghost Wipe		Instrument: ICP13	
Dilution: 1		Prepared: 12/07/2021 (288132)	
Sampling Parameter: Area 100 cm ²		Analyzed: 12/07/2021 (288145)	
Media: Ghost Wipe			
Sampling Location: 2108 Bering Dr Ste B			
Analyte	Result (ug/sample)	Result (ug/100cm ²)	RL (ug/sample)
Cobalt	0.94	0.94	0.075

Sample ID: 12-4-W5		Collected: 12/04/2021	
Lab ID: 2134131005		Received: 12/07/2021	
Method: NIOSH 9102 Mod, Ghost Wipe		Instrument: ICP13	
Dilution: 1		Prepared: 12/07/2021 (288132)	
Sampling Parameter: Area 100 cm ²		Analyzed: 12/07/2021 (288145)	
Media: Ghost Wipe			
Sampling Location: 2108 Bering Dr Ste B			
Analyte	Result (ug/sample)	Result (ug/100cm ²)	RL (ug/sample)
Cobalt	1.2	1.2	0.075

Sample ID: 12-4-W6		Collected: 12/04/2021	
Lab ID: 2134131006		Received: 12/07/2021	
Method: NIOSH 9102 Mod, Ghost Wipe		Instrument: ICP13	
Dilution: 1		Prepared: 12/07/2021 (288132)	
Sampling Parameter: Area 100 cm ²		Analyzed: 12/07/2021 (288145)	
Media: Ghost Wipe			
Sampling Location: 2108 Bering Dr Ste B			
Analyte	Result (ug/sample)	Result (ug/100cm ²)	RL (ug/sample)
Cobalt	0.10	0.10	0.075

Sample ID: 12-4-W7		Collected: 12/04/2021	
Lab ID: 2134131007		Received: 12/07/2021	
Method: NIOSH 9102 Mod, Ghost Wipe		Instrument: ICP13	
Dilution: 1		Prepared: 12/07/2021 (288132)	
Sampling Parameter: Area 100 cm ²		Analyzed: 12/07/2021 (288145)	
Media: Ghost Wipe			
Sampling Location: 2108 Bering Dr Ste B			
Analyte	Result (ug/sample)	Result (ug/100cm ²)	RL (ug/sample)
Cobalt	2.0	2.0	0.075



ANALYTICAL REPORT

Workorder: **34-2134131**

Client Project ID: 2108 Bering Dr Ste B

Purchase Order: NA

Project Manager: Stella Hanis

Analytical Results

Sample ID: 12-4-W8		Collected: 12/04/2021	
Lab ID: 2134131008		Received: 12/07/2021	
Method: NIOSH 9102 Mod, Ghost Wipe		Instrument: ICP13	
Dilution: 1		Prepared: 12/07/2021 (288132)	
Sampling Parameter: Area 100 cm ²		Analyzed: 12/07/2021 (288145)	
Media: Ghost Wipe			
Sampling Location: 2108 Bering Dr Ste B			
Analyte	Result (ug/sample)	Result (ug/100cm ²)	RL (ug/sample)
Cobalt	0.17	0.17	0.075

Sample ID: 12-4-W9		Collected: 12/04/2021	
Lab ID: 2134131009		Received: 12/07/2021	
Method: NIOSH 9102 Mod, Ghost Wipe		Instrument: ICP13	
Dilution: 1		Prepared: 12/07/2021 (288132)	
Sampling Parameter: Area 100 cm ²		Analyzed: 12/07/2021 (288145)	
Media: Ghost Wipe			
Sampling Location: 2108 Bering Dr Ste B			
Analyte	Result (ug/sample)	Result (ug/100cm ²)	RL (ug/sample)
Cobalt	0.42	0.42	0.075

Sample ID: 12-4-W10		Collected: 12/04/2021	
Lab ID: 2134131010		Received: 12/07/2021	
Method: NIOSH 9102 Mod, Ghost Wipe		Instrument: ICP13	
Dilution: 1		Prepared: 12/07/2021 (288132)	
Sampling Parameter: Area 100 cm ²		Analyzed: 12/07/2021 (288145)	
Media: Ghost Wipe			
Sampling Location: 2108 Bering Dr Ste B			
Analyte	Result (ug/sample)	Result (ug/100cm ²)	RL (ug/sample)
Cobalt	0.53	0.53	0.075

Sample ID: 12-4-FB		Collected: 12/04/2021	
Lab ID: 2134131011		Received: 12/07/2021	
Method: NIOSH 9102 Mod, Ghost Wipe		Instrument: ICP13	
Dilution: 1		Prepared: 12/07/2021 (288132)	
Sampling Parameter: Area Not Applicable		Analyzed: 12/07/2021 (288145)	
Media: Ghost Wipe			
Sampling Location: 2108 Bering Dr Ste B			
Analyte	Result (ug/sample)	Result (ug/100cm ²)	RL (ug/sample)
Cobalt	<0.075	NA	0.075

Report Authorization (/S/ is an electronic signature that complies with 21 CFR Part 11)

Method (Analysis Batch)	Analyst	Peer Review
NIOSH 9102 Mod, Ghost Wipe (288145)	/S/ Peter P. Steen 12/07/2021 14:27	/S/ Kristie F. Bitner 12/07/2021 15:08

**ANALYTICAL REPORT**Workorder: **34-2134131**

Client Project ID: 2108 Bering Dr Ste B

Purchase Order: NA

Project Manager: Stella Hanis

Laboratory Contact Information

ALS Environmental
960 W Levoy Drive
Salt Lake City, Utah 84123

Phone: (801) 266-7700
Email: alslt.lab@ALSGlobal.com
Web: www.alssl.com

General Lab Comments

The results provided in this report relate only to the items tested.

Samples were received in acceptable condition unless otherwise noted.

The following was provided by the client: Sample ID, Collection Date, Sampling Location, Media Type, Sampling Parameter, Collection Date, Media Type, and Sampling Parameter can potentially affect the validity of the results.

Samples have not been blank corrected unless otherwise noted.

This test report shall not be reproduced, except in full, without written approval of ALS.

ALS provides professional analytical services for all samples submitted. ALS is not in a position to interpret the data and assumes no responsibility for the quality of the samples submitted.

All quality control samples processed with the samples in this report yielded acceptable results unless otherwise noted.

ALS is accredited for specific fields of testing (scopes) in the following testing sectors. The quality system implemented at ALS conforms to accreditation requirements and is applied to all analytical testing performed by ALS. The following table lists testing sector, accreditation body, accreditation number and website. Please contact these accrediting bodies or your ALS project manager for the current scope of accreditation that applies to your analytical testing.

Testing Sector	Accreditation Body (Standard)	Certificate Number	Website
Environmental	PJLA (DoD ELAP)	L20-57	http://www.pjlabs.com
	PJLA (ISO 17025)	L20-58	http://www.pjlabs.com
Industrial Hygiene	AIHA (ISO 17025 & AIHA IHLAP)	101574	http://www.aihaaccreditedlabs.org
	DOECAP-AP	L20-59	http://www.pjlabs.com
	Washington	C596	https://ecology.wa.gov/Regulations-Permits/Permits-certifications/Laboratory-Accreditation
Dietary Supplements	PJLA (ISO 17025)	L20-58	http://www.pjlabs.com

Definitions

LOD = Limit of Detection = MDL = Method Detection Limit, A statistical estimate of method/media/instrument sensitivity.

LOQ = Limit of Quantitation = RL = Reporting Limit, A verified value of method/media/instrument sensitivity.

ND = Not Detected, Testing result not detected above the LOD or LOQ.

NA = Not Applicable.

** No result could be reported, see sample comments for details.

< Means this testing result is less than the numerical value.

() This testing result is between the LOD and LOQ and has higher analytical uncertainty than values at or above the LOQ.



LA Testing

5431 Industrial Drive, Huntington Beach, CA 92649

Phone: (714) 828-4999 Fax: (714) 828-4944 Email: gardengrovelab@latesting.com

Attn: **Jorge Vizcaino**
Aero-Environmental Consulting, Inc.
1426 Via Isola
Monterey, CA 93940
Phone: (831) 394-1199
Fax:

12/8/2021

The following analytical report covers the analysis performed on samples submitted to LA Testing on 12/6/2021. The results are tabulated on the attached data pages for the following client designated project:

Quantum Labs

The reference number for these samples is EMSL Order #332129185. Please use this reference when calling about these samples. If you have any questions, please do not hesitate to contact me at (714) 828-4999.

Approved By:

Michael Chapman, Laboratory Manager

The samples associated with this report were received in good condition unless otherwise noted. This report relates only to those items tested as received by the laboratory. The QC data associated with the sample results meet the recovery and precision requirements unless specifically indicated. The final results are not blank corrected unless specifically indicated. The laboratory is not responsible for final results calculated using air volumes that have been provided by non-laboratory personnel. This report may not be reproduced except in full and without written approval by EMSL Analytical, Inc.

**LA Testing**

5431 Industrial Drive, Huntington Beach, CA 92649

Phone/Fax: (714) 828-4999 / (714) 828-4944

<http://www.LATesting.com>gardengrovelab@lateesting.com

LA Testing Order: 332129185

CustomerID: 32AECO77

CustomerPO:

ProjectID:

Attn: **Jorge Vizcaino**
Aero-Environmental Consulting, Inc.
1426 Via Isola
Monterey, CA 93940

Phone: (831) 394-1199
 Fax:
 Received: 12/6/2021 11:20 AM
 Collected: 12/2/2021

Project: **Quantum Labs****Analytical Results**

Client Sample Description 12221-A1
 at neg, air machine exhaust outside of bldg. **Collected:** 12/2/2021 **Lab ID:** 332129185-0001

Method	Parameter	Result	RL	Units	Prep Date & Analyst	Analysis Date & Analyst
METALS						
7300 Modified	Cobalt	<0.34	0.34	µg/m³	12/7/2021 TH	12/7/2021 TH

Client Sample Description 12221-A2
 Perimeter air sample in office **Collected:** 12/2/2021 **Lab ID:** 332129185-0002

Method	Parameter	Result	RL	Units	Prep Date & Analyst	Analysis Date & Analyst
METALS						
7300 Modified	Cobalt	<0.37	0.37	µg/m³	12/7/2021 TH	12/7/2021 TH

Client Sample Description 12221-A3
 Personal air sample on Mario Garza **Collected:** 12/2/2021 **Lab ID:** 332129185-0003

Method	Parameter	Result	RL	Units	Prep Date & Analyst	Analysis Date & Analyst
METALS						
7300 Modified	Cobalt	<0.45	0.45	µg/m³	12/7/2021 TH	12/7/2021 TH

Client Sample Description 12221-A4
 Personal air Sample on Kristen Davis **Collected:** 12/2/2021 **Lab ID:** 332129185-0004

Method	Parameter	Result	RL	Units	Prep Date & Analyst	Analysis Date & Analyst
METALS						
7300 Modified	Cobalt	<0.48	0.48	µg/m³	12/7/2021 TH	12/7/2021 TH

Definitions:

MDL - method detection limit

J - Result was below the reporting limit, but at or above the MDL

ND - indicates that the analyte was not detected at the reporting limit

RL - Reporting Limit (Analytical)

D - Dilution Sample required a dilution which was used to calculate final results



Chain of Custody

EMSL Order Number (Lab Use Only):

#332129185

5431 Industrial Drive

Huntington Beach, CA 92649

PHONE: (714) 828-4999

FAX: (714) 828-4944

Company: Aero-Environmental Consulting, Inc.		EMSL-Bill to: <input checked="" type="checkbox"/> Same <input type="checkbox"/> Different If Bill to is Different note instructions in Comments**	
Street: 1426 Via Isola		Third Party Billing requires written authorization from third party	
City: Monterey	State/Province: CA	Zip/Postal Code: 93940	Country: US
Report To (Name): Jorge Vizcaino		Telephone #: 831.394.1199	
Email Address: Jorge@Aero-Enviro.com		Fax #:	Purchase Order:
Project Name/Number: Quantum Labs		Please Provide Results: <input type="checkbox"/> FAX <input checked="" type="checkbox"/> E-mail <input type="checkbox"/> Mail	
U.S. State Samples Taken: CA		Connecticut Samples: Commercial Residential	
Turnaround Time (TAT) Options* - Please Check			
<input type="checkbox"/> 3 Hour <input type="checkbox"/> 6 Hour <input type="checkbox"/> 24 Hour <input checked="" type="checkbox"/> 48 Hour <input type="checkbox"/> 72 Hour <input type="checkbox"/> 96 Hour <input type="checkbox"/> 1 Week <input type="checkbox"/> 2 Week			
*For RUSH TAT's Please Call Ahead to Confirm Lab Hours and Availability. Not all TAT options are valid for every test. Materials Science and IAQ TATs are in Business Days rather than Hours (i.e. 24 Hour = End of Next Business Day)			
Asbestos			
PCM - Air <input type="checkbox"/> NIOSH 7400 <input type="checkbox"/> w/ 8hr. TWA TEM - Air <input type="checkbox"/> 4-4.5hr TAT(AHERA ONLY) <input type="checkbox"/> AHERA 40 CFR, Part 763 <input type="checkbox"/> NIOSH 7402 <input type="checkbox"/> EPA Level II <input type="checkbox"/> ISO 10312 TEM - Water Fibers >10µm <input type="checkbox"/> Waste <input type="checkbox"/> Drinking All Fiber Sizes <input type="checkbox"/> Waste <input type="checkbox"/> Drinking		PLM - Bulk <input type="checkbox"/> PLM EPA 600/R-93/116 <input type="checkbox"/> PLM EPA NOB (<1%) <input type="checkbox"/> NYS 198.1 (friable-NY) <input type="checkbox"/> NYS 198.6 (non-friable-NY) Point Count <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1000 (<0.1%) Point Count w/ Gravimetric <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1000 (<0.1%) TEM - Dust <input type="checkbox"/> Microvac - ASTM D 5755 <input type="checkbox"/> Wipe-ASTM D6480	
Flame Atomic Absorption <input type="checkbox"/> Chips SW846-7000B or AOAC 974.02 <input type="checkbox"/> Soil SW846-7000B/7420 <input type="checkbox"/> Air NIOSH 7082 <input type="checkbox"/> Wastewater SM3111B or SW846-7000B/7420 <input type="checkbox"/> ASTM Wipe SW846-7000B/7420 <input type="checkbox"/> non ASTM Wipe SW846-7000B/7420 <input type="checkbox"/> TCLP SW846-1311/7420/SM 3111B		ICP <input checked="" type="checkbox"/> Air NIOSH 7300 Modified COBALT <input type="checkbox"/> non ASTM Wipe SW846-6010B or C <input type="checkbox"/> ASTM Wipe SW846-6010B or C <input type="checkbox"/> Soil SW846-6010 B or C <input type="checkbox"/> Waste Water SW846-6010B or C <input type="checkbox"/> TCLP SW846-6010B or C	
Graphite Furnace Atomic Absorption <input type="checkbox"/> Soil SW846-7421 <input type="checkbox"/> Wastewater EPA 200.9 <input type="checkbox"/> Air NIOSH 7105 <input type="checkbox"/> Drinking Water EPA 200.9		Other: <input type="checkbox"/>	
Microbiology			
Wipe and Bulk Samples <input type="checkbox"/> Mold & Fungi - Direct Examination <input type="checkbox"/> Mold & Fungi Culture (Genus Only) <input type="checkbox"/> Mold & Fungi Culture (Genus & Species) <input type="checkbox"/> Bacterial Count & ID (Up to Three Types) <input type="checkbox"/> Bacterial Count & ID (Up to Five Types) <input type="checkbox"/> MRSA <input type="checkbox"/> Pseudomonas aeruginosa		Air Samples <input type="checkbox"/> Mold & Fungi (Spore Trap) <input type="checkbox"/> Mold & Fungi Culture (Genus Only) <input type="checkbox"/> Mold & Fungi (Genus & Species) <input type="checkbox"/> Bacterial Culture & ID (Up to Three Types) <input type="checkbox"/> Bacterial Culture & ID (Up to Five Types) <input type="checkbox"/> Endotoxin Testing Real Time Q-PCR (See Analytical Guide for Code) Code: Legionella <input type="checkbox"/> Level 1 <input type="checkbox"/> Level 2 <input type="checkbox"/> Level 3 <input type="checkbox"/> Level 4 Other: <input type="checkbox"/>	
Water Samples <input type="checkbox"/> Total Coliform & E.coli (P/A) <input type="checkbox"/> Fecal Coliform (SM 9222D) <input type="checkbox"/> Sewage Screen <input type="checkbox"/> Heterotrophic Plate Count (SM 9215)		Materials Science <input type="checkbox"/> Common Particle ID (large particles) <input type="checkbox"/> Full Particle ID (environmental dust) <input type="checkbox"/> Basic Material ID (solids) <input type="checkbox"/> Advanced Material ID <input type="checkbox"/> Physical Testing (Tensile, Compression) <input type="checkbox"/> Combustion-by-products (soot, char, etc.) <input type="checkbox"/> X-Ray Fluorescence (elem. analysis) <input type="checkbox"/> X-Ray Diffraction (Crystalline Part.) <input type="checkbox"/> MMVF's (Fibrous glass, RCF's) <input type="checkbox"/> Particle Size (sieve/microscopy/laser) <input type="checkbox"/> Combustible Dust <input type="checkbox"/> Petrographic Examination Other: <input type="checkbox"/>	
IAQ Nuisance Dust NIOSH <input type="checkbox"/> 0500 <input type="checkbox"/> 0600 Airborne Dust <input type="checkbox"/> PM10 <input type="checkbox"/> TSP Silica Analysis: <input type="checkbox"/> All Species Silica Analysis - Single Species <input type="checkbox"/> Alpha Quartz <input type="checkbox"/> Cristobalite <input type="checkbox"/> Tridymite <input type="checkbox"/> HVAC Efficiency <input type="checkbox"/> Carbon Black <input type="checkbox"/> Airborne Oil Mist Radon Testing: Call for Kit and COC Other: <input type="checkbox"/>			
**Comments/Special Instructions: ANALYZE FOR COBALT			
Client Sample #'s		Total # of Samples: 4	
Relinquished (Client): David Kummer		Date: 12-2-2021	
Received (Lab): EMEX		Date: 12/6/21	
		Time: 11:20AM	

Analysis Completed in Accordance with EMSL's Terms and Conditions located in the Analytical Price Guide



Chain of Custody

EMSL Order Number *(Lab Use Only)*:

#332129185

5431 Industrial Drive

Huntington Beach, CA 92649

PHONE: (714) 828-4999

FAX: (714) 828-4944

[illegible]

Analysis Completed in Accordance with EMSL's Terms and Conditions located in the Analytical Price Guide



831.394.1199 E-Mail: Jorge@aero-enviro.com www.Aero-Enviro.com

APPENDIX C-PHOTOGRAPHIC DOCUMENTATION



Photo 1-Interior of Facility with Negative HEPA Air Machines



Photo 2-Interior Corridor

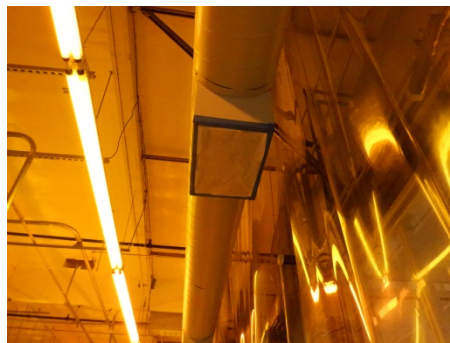


Photo 3-Critical barriers on ventilation duct exhausts



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Photo 4-Interior of Lab M



Photo 5-Perimeter Air Sample by Negative Air Pressure Exhaust



Photo 6-Simon Planck's Office



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Photo 7-Air sample collection in Clean Room Test Lab



Photo 8-Baseline wipe sample in warehouse floor



Photo 9-Baseline wipe sample on horizontal hood bench of Warehouse



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Photo 10-Baseline wipe sample in Clean Room Test Lab



Photo 11-Baseline wipe sample with elevated cobalt levels in Simon's Office



Photo 12-Warehouse Area with Clearance Wipe Samples



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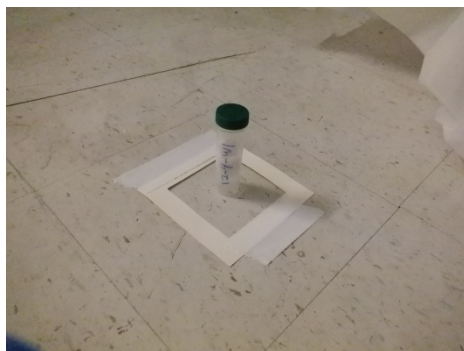


Photo 13-Clearance Wipe Sample on Warehouse Floor



Photo 14-Clearance Wipe Sample on horizontal equipment surface of Warehouse Area

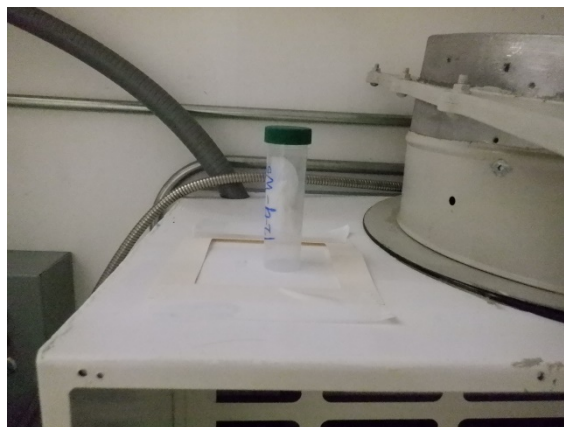


Photo 15-Clearance Wipe Sample on horizontal bench of Warehouse area



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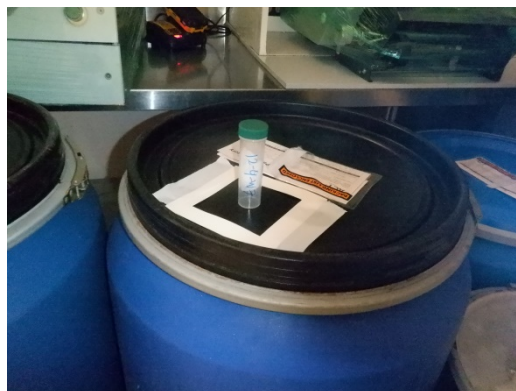


Photo 16-Clearance Wipe Sample on Plastic Storage Drum



Photo 17-Clearance Wipe Sample of Dividing Door



Photo 18-Clearance Wipe Sample above Equipment in Warehouse Area



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APPENDIX D-Professional Certifications

State of California
Division of Occupational Safety and Health
Certified Asbestos Consultant

Jorge Ignacio Vizcaino

Name



Certification No. 04-3554

Expires on 04/15/22

This certification was issued by the Division of Occupational Safety and Health as authorized by Sections 7160 et seq. of the Business and Professions Code.

The Board for Global EHS Credentialing (BGC)

through its vested authority, hereby confirms that

Jorge I. Vizcaino

has met all requirements of education, experience, and examination, and on-going maintenance set forth through the BGC's American Board of Industrial Hygiene®'s (ABIH®) credentialing division for re-certification in the Comprehensive Practice of Industrial Hygiene and is thereby conferred the credential of

Certified Industrial Hygienist® (CIH®)

The aforementioned individual is given all rights, privileges, and responsibilities as both a diplomate of the BGC and holder of the CIH credential, provided that the credential is not suspended or revoked, and it is renewed annually. Moreover, the holder must meet all recertification requirements, including the obligation to practice ethically as prescribed by the BGC.



Credential Number: 9814 CP

Award Date: October 4, 2010

Expiration Date: June 1, 2026

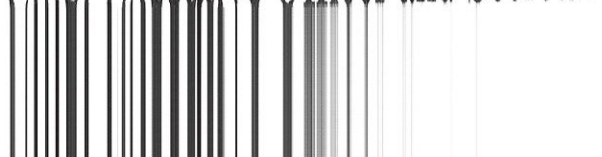
A handwritten signature in blue ink, reading "Cynthia Hanko", written over a horizontal line.

Cynthia Hanko, CIH
Chair of the Board of Directors



A handwritten signature in blue ink, reading "Ulric K. Chung", written over a horizontal line.

Ulric K. Chung, MCS, PhD
Chief Executive Officer and Secretary



From: recertinfo@ihmm.org
To: [Jorge Vizcaino](#)
Subject: Congratulations on Recertifying Your CHMM!
Date: Thursday, November 5, 2020 10:38:14 AM

Dear Vizcaino,

Congratulations on successfully recertifying your CHMM credential! Thank you for your continued effort in safety when working with hazardous materials. You are one of the many reasons why this world is a safer place to live. The amount of time you have taken to recertify has not gone unnoticed by the IHMM staff.

Your recertification application has been processed for the cycle ending 10/31/2021. Your new credential expiration date is 10/31/2026.

Please use this electronic copy of your **CHMM Letter of Compliance** as proof of credential and for any third-party verification needs until your presentation copies of your CHMM Letter of Compliance (proof of credential) and Certificate (suitable for display) arrive.

IHMM certifications are the standard of excellence in the hazardous materials industry. As an IHMM credential holder, you can:

- Validate your expertise in many areas
- Distinguish yourself in a competitive marketplace
- Increase your employment options
- Demonstrate ongoing competence
- Expand your professional network
- Benefit from public sector outreach
- Receive global recognition

You are now authorized to continue using your credential designation through the expiration date listed in your *MyIHMM* account online and on your certificate as long as you adhere to the CHMM Code of Ethics, remain in good standing, and maintain all required fees.

Remember to regularly access your *MyIHMM* account to monitor your certification and fee due dates, to maintain your record's accuracy and to keep abreast of certification news. As a Certificant you agree to the proper use of the logo and acronym designation, and to surrender the certificate in the event of withdrawal of certification by IHMM.

We appreciate your continued support of IHMM and your commitment to the professional excellence embodied in your credential.

Sincerely,



Gene Guilford
Executive Director



Institute of Hazardous Materials Management
9210 Corporate Blvd., Suite 470 | Rockville, MD 20850
(301) 984-8969 | (301) 984-1516 fax





STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC HEALTH



LEAD-RELATED CONSTRUCTION CERTIFICATE

INDIVIDUAL:



Jorge Vizcaino

CERTIFICATE TYPE:

Lead Inspector/Assessor

NUMBER:

LRC-00001930

EXPIRATION DATE:

11/3/2022

Disclaimer: This document alone should not be relied upon to confirm certification status. Compare the individual's photo and name to another valid form of government issued photo identification. Verify the individual's certification status by searching for Lead-Related Construction Professionals at www.cdph.ca.gov/programs/clppb or calling (800) 597-LEAD.





STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC HEALTH



LEAD-RELATED CONSTRUCTION CERTIFICATE

INDIVIDUAL:



David Kummer

CERTIFICATE TYPE:

Lead Sampling Technician

NUMBER:

LRC-00007343

EXPIRATION DATE:

10/27/2022

Disclaimer: This document alone should not be relied upon to confirm certification status. Compare the individual's photo and name to another valid form of government issued photo identification. Verify the individual's certification status by searching for Lead-Related Construction Professionals at www.cdph.ca.gov/programs/clppb or calling (800) 597-LEAD.



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Surface Wipe Sample Evaluation of Cobalt 59 Dust following interior Cobalt cleanup operations inside Lab Q at Quantum Labs, San Jose, California

Date Inspection Conducted:	12/09/2021
Date of Report:	12/15/2021
Assignment:	Surface Wipe Sample Evaluation following Cobalt 59 Decontamination activities for Lab Q, Quantum Labs
Address of Evaluation	QUANTUM LABS- 2108 Bering Dr., Suite B, San Jose, CA
Work Performed By:	Jorge Vizcaino, CIH 9814
Aero-Environmental Project Name:	QUANTUM LABS-Cobalt Decontamination Monitoring

QUANTUM LABS
2108 BERING DR. UNIT B
SAN JOSE, CA 95131

Highlights of this Surface Wipe Sample Evaluation following Cobalt 59 Decontamination activities for Lab Q

On December 9th, 2021, Aero-Environmental Certified Industrial Hygienist (CIH 9814) Jorge Vizcaino, and Industrial Hygiene Technician David Kummer (LRC-00007343) conducted a Surface Wipe Sample Evaluation following Cobalt 59 Decontamination activities for Lab Q at Quantum Labs.

What Aero-Environmental Did

- We collected 24 clearance wipe samples (and two field blanks) of the Lab Q area following decontamination of this area.
- We communicated with the Belfor Environmental project manager any issues of concern.



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What We Found

- Analytical results for the clearance wipe samples indicated detectable cobalt surface concentrations in all but four (4) of the samples collected, with one (1) wipe sample exceeding the BNL "Free Release" Clearance Level of 2 $\mu\text{g}/100\text{ cm}^2$.
- All clearance wipe sample results for Lab Q area (see attached site plan) were below the BNL "Free Release" level of 2 $\mu\text{g}/100\text{ cm}^2$ which is the maximum level allowed on accessible surfaces.
- The surface wipe sample (12-9-W24) concentration for the Temescal Exhaust Fan located on the roof was extremely high at 420 $\mu\text{g}/100\text{ cm}^2$.

What Aero-Environmental recommends

- Based on the extremely elevated cobalt 59 concentration in the Temescal Exhaust Fan, the following HVAC components are considered potentially contaminated and should be decontaminated by Belfor Environmental:
- Motionless air areas where dust accumulates
- Area at the top of air ducts
- Access flanges
- Mechanical areas associated with motors and blowers
- Filters
- Damper
- Control Valves
- Interior of Ducts

Abbreviations

cm^2	Square centimeter
$\mu\text{g}/100\text{ cm}^2$	Micrograms per 100 square centimeters
mg/m^3	Milligrams per cubic meter
ABIH®	American Board of Industrial Hygienists
ACGIH®	American Conference of Governmental Industrial Hygienists
BNL	Brookhaven National Lab
CAL-OSHA	California Occupational Safety and Health Administration
CIH	Certified Industrial Hygienist
CFR	Code of Federal Regulations
CCR	California Code of Regulations
HEPA	High Efficiency Particulate Air



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NIOSH	National Institute of Occupational Safety and Health
PPE	Personal Protective Equipment
OEL	Occupational Exposure Level
PBZ	Personal Breathing Zone
ppb	Parts per billion
ppm	Parts per million
PEL	Permissible exposure limit
PPE	Personal Protective Equipment
TWA	Time-weighted average

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Summary

On December 9th, 2021, Aero-Environmental Certified Industrial Hygienist (CIH 9814) Jorge Vizcaino, and Industrial Hygiene Technician David Kummer (LRC-00007343) conducted a Surface Wipe Sample Evaluation following Cobalt 59 Decontamination activities for Lab Q at Quantum Labs. Following an opening safety meeting and walkthrough of the decontamination areas, the industrial hygiene professionals evaluated the cobalt decontamination containment system for Lab Q that Belfor



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Environmental indicated was ready for surface wipe sample clearance testing. Surface wipe sampling of this area was conducted by selecting specific floor and elevated horizontal surfaces, where cobalt dust could have potentially accumulated. The cobalt decontamination containment was also evaluated and found to be satisfactory. In addition, cobalt decontamination activities and work practices were discussed with the project lead supervisor, Greg Henke.

Twenty-four (24) clearance wipe samples (and two field blanks) were collected of the Lab Q area following decontamination of this area.. The location of these surface wipe samples included the entire flooring, hood covers, cabinet shelving, Implanter ceiling (roof), covers of hanging fluorescent lights, fume hood benches, flooring in the cross hatch area, and the Temescal exhaust fan in the roof of the building.

All clearance wipe sample results for Lab Q area (see attached site plan) were below the BNL "Free Release" level of 2 ug/100 cm² which is the maximum level allowed on accessible surfaces.

The surface wipe sample (12-9-W24) concentration for the Temescal Exhaust Fan located on the roof was extremely high at 420 ug/100 cm².

Introduction

On December 9th, 2021, Aero-Environmental Certified Industrial Hygienist (CIH 9814) Jorge Vizcaino, and Industrial Hygiene Technician David Kummer (LRC-00007343) conducted a Surface Wipe Sample Evaluation following Cobalt 59 Decontamination activities for Lab Q at Quantum Labs. Following an opening safety meeting and walkthrough of the decontamination areas, the industrial hygiene professionals evaluated the cobalt decontamination containment system for Lab Q that Belfor Environmental indicated was ready for surface wipe sample clearance testing. Surface wipe sampling of this area was conducted by selecting specific floor and elevated horizontal surfaces, where cobalt dust could have potentially accumulated. The cobalt decontamination containment was also evaluated and found to be satisfactory. In addition, cobalt decontamination activities and work practices were discussed with the project lead supervisor, Greg Henke.



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Methods

Belfor Environmental Scope of Work consists of the following:

- Set up critical barriers and containments to isolate work areas.
- Lab pack of loose chemicals.
- Removal of Select Exhaust Systems
- Removal of specified tools owned by Maxim.
- Removal of specified pipe runs
- Decontamination of Quantum tools
- Clean Facility of Cobalt 59 contamination.

Aero-Environmental Consulting conducted the following activities:

- 1) Collection of clearance wipe samples in Lab Q and of the Temescal Exhaust Fan on the roof following decontamination.

TABLE 1-AIR/SURFACE SAMPLING METHODS		
Substance	Reason for Sampling	Sampling Methods
Surface Cobalt Dust	Possible Exposure during cobalt decontamination activities	NIOSH Method 9102

Evaluation Criteria

The primary source and industry-wide reference for surface wipe sampling and “clearance” criteria for surface contamination is the Brookhaven Nation Lab document IH 75190-Surface Wipe Sampling for Metals. This document describes a field procedure for taking wipe samples for metals on surfaces. It is based on methodology described in NIOSH 9100 “Lead in Surface Wipe Samples” of the NIOSH Manual of Analytical Methods. The goal of the procedure is to provide a uniform methodology to collect representative samples. Using this method will ensure repeatability between various sampling personnel and between surface configurations. It is used for characterizing surface levels for the following reasons:

- Decommissioning operational areas
- Evaluating the effectiveness of clean-up of a spill



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- Evaluating compliance with housekeeping or “free” public release levels in operational areas
- Characterizing a piece of equipment for release.

Results

Analytical results for the clearance wipe samples indicated detectable cobalt surface concentrations in all but four (4) of the samples collected, with one (1) wipe sample exceeding the BNL “Free Release” Clearance Level of 2 $\mu\text{g}/100\text{cm}^2$.

All clearance wipe sample results for Lab Q area (see attached site plan) were below the BNL “Free Release” level of 2 $\mu\text{g}/100\text{cm}^2$ which is the maximum level allowed on accessible surfaces.

The surface wipe sample (12-9-W24) concentration for the Temescal Exhaust Fan located on the roof was extremely high at 420 $\mu\text{g}/100\text{cm}^2$.

TABLE 2- Surface Wipe Sample Results-Lab Q and Temescal Exhaust Fan

Sample #/Date	Personal/Area	Concentration
12-9-W1-Dec 9	Floor	0.42 $\mu\text{g}/100\text{cm}^2$
12-9-W2-Dec 9	Floor	0.37 $\mu\text{g}/100\text{cm}^2$
12-9-W3-Dec 9	Floor	0.21 $\mu\text{g}/100\text{cm}^2$
12-9-W4-Dec 9	Hood Roof (top cover)	1.0 $\mu\text{g}/100\text{cm}^2$
12-9-W5-Dec 9	MDA2.4-Cabinet	< 0.075 $\mu\text{g}/100\text{cm}^2$
12-9-W6-Dec 9	Hood Ceiling (top cover)	0.74 $\mu\text{g}/100\text{cm}^2$
12-9-W7-Dec 9	Cabinet Shelf	<0.075 $\mu\text{g}/100\text{cm}^2$
12-9-W8-Dec 9	Floor	0.13 $\mu\text{g}/100\text{cm}^2$
12-9-W9-Dec 9	Floor	0.21 $\mu\text{g}/100\text{cm}^2$
12-9-W10-Dec 9	Floor	0.099 $\mu\text{g}/100\text{cm}^2$
12-10-W11-Dec 9	Implanter Roof (top	0.41 $\mu\text{g}/100\text{cm}^2$



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	cover)	
12-9-W12-Dec 9	Implanter Roof (top cover)	1.1 $\mu\text{g}/100\text{cm}^2$
12-9-W13-Dec 9	Implanter Roof (top cover)	0.39 $\mu\text{g}/100\text{cm}^2$
12-9-W14-Dec 9	Floor	0.077 $\mu\text{g}/100\text{cm}^2$
12-9-W15-Dec 9	Floor	<0.075 $\mu\text{g}/100\text{cm}^2$
12-9-W16-Dec 9	Floor	0.27 $\mu\text{g}/100\text{cm}^2$
12-9-W17-Dec 9	Hanging Fluorescent Light Hood	0.24 $\mu\text{g}/100\text{cm}^2$
12-9-W18-Dec 9	Fume Hood	0.28 $\mu\text{g}/100\text{cm}^2$
12-9-W19-Dec 9	Acid Bench Light Hood	0.86 $\mu\text{g}/100\text{cm}^2$
12-9-W20-Dec 9	Acid Station Bench	<0.075 $\mu\text{g}/100\text{cm}^2$
12-9-W21-Dec 9	Floor-Cross Hatch Area	0.27 $\mu\text{g}/100\text{cm}^2$
12-9-W22-Dec 9	Floor-Cross Hatch Area	0.089 $\mu\text{g}/100\text{cm}^2$
12-9-W23-Dec 9	Cabinet Roof-Cross Hatch Area	0.68 $\mu\text{g}/100\text{cm}^2$
12-9-W24-Dec 9	Temescal Exhaust Fan	420 $\mu\text{g}/100\text{cm}^2$
12-9-FB1-Dec 9	Field Blank	NA
12-9-FB2-Dec 9	Field Blank	NA

Conclusions and Recommendations

- This dust evaluation did indicate cobalt dust contamination inside the Temescal Exhaust Fan located on the roof of this building, with surface contamination levels extremely elevated for this sample. Therefore, based on the extremely elevated cobalt 59 concentration in the Temescal Exhaust Fan, the following HVAC components are considered potentially contaminated and should be decontaminated by Belfor Environmental:
- Motionless air areas where dust accumulates
- Area at the top of air ducts
- Access flanges



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- Mechanical areas associated with motors and blowers
- Filters
- Damper
- Control Valves
- Interior of Ducts

All clearance wipe sample results for Lab Q were at or below the BNL "Free Release" level of 2 ug/100 cm² which is the maximum level allowed on accessible surfaces.

This report serves as a surface wipe sampling assessment report for this decontamination project at Quantum Labs.

Availability of Report/Disclaimer

The recommendations in this report are made on the basis of the findings at the workplace evaluated and may not be applicable to other workplaces. This report was prepared by Jorge Vizcaino, CIH/CHMM with Aero-Environmental Consulting, INC. Analytical support was provided by AIHA Accredited Laboratory ALS Environmental in Salt Lake City, Utah.

Sincerely,
Aero-Environmental Consulting, INC

Jorge Vizcaino
Certified Industrial Hygienist No. 9814
Certified Hazardous Material Manager 19631





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FIGURE 1 -FLOOR PLAN WITH WIPE SAMPLING LOCATIONS





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APPENDIX A-ANALYTICAL RESULTS



ANALYTICAL REPORT

Report Date: December 14, 2021

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Workorder: **34-2134424**

Client Project ID: Quantum Labs, San Jose, CA
Purchase Order: NA
Project Manager: Stella Hanis

Analytical Results

Sample ID: 12-9-W1-Floor		Collected: 12/09/2021
Lab ID: 2134424001		Received: 12/10/2021
Sampling Location: Quantum Labs		
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP12
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/13/2021 (288331) Analyzed: 12/14/2021 (288406)
Analyte	Result (ug/sample)	RL (ug/sample)
Cobalt	0.42	0.075

Sample ID: 12-9-W2-Floor		Collected: 12/09/2021
Lab ID: 2134424002		Received: 12/10/2021
Sampling Location: Quantum Labs		
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP12
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/13/2021 (288331) Analyzed: 12/14/2021 (288406)
Analyte	Result (ug/sample)	RL (ug/sample)
Cobalt	0.37	0.075

Sample ID: 12-9-W3-Floor		Collected: 12/09/2021
Lab ID: 2134424003		Received: 12/10/2021
Sampling Location: Quantum Labs		
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP12
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/13/2021 (288331) Analyzed: 12/14/2021 (288406)
Analyte	Result (ug/sample)	RL (ug/sample)
Cobalt	0.21	0.075



ANALYTICAL REPORT

Workorder: **34-2134424**

Client Project ID: Quantum Labs, San Jose, CA

Purchase Order: NA

Project Manager: Stella Hanis

Analytical Results

Sample ID: 12-9-W4-Hood Roof		Collected: 12/09/2021
Lab ID: 2134424004	Sampling Location: Quantum Labs	Received: 12/10/2021
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP12
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/13/2021 (288331) Analyzed: 12/14/2021 (288406)
Analyte	Result (ug/sample)	RL (ug/sample)
Cobalt	1.0	0.075

Sample ID: 12-9-W5-MDA2-4 Cabinet		Collected: 12/09/2021
Lab ID: 2134424005	Sampling Location: Quantum Labs	Received: 12/10/2021
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP12
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/13/2021 (288331) Analyzed: 12/14/2021 (288406)
Analyte	Result (ug/sample)	RL (ug/sample)
Cobalt	<0.075	0.075

Sample ID: 12-9-W6-Hood Ceiling		Collected: 12/09/2021
Lab ID: 2134424006	Sampling Location: Quantum Labs	Received: 12/10/2021
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP12
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/13/2021 (288331) Analyzed: 12/14/2021 (288406)
Analyte	Result (ug/sample)	RL (ug/sample)
Cobalt	0.74	0.075

Sample ID: 12-9-W7-Cabinet Shelf		Collected: 12/09/2021
Lab ID: 2134424007	Sampling Location: Quantum Labs	Received: 12/10/2021
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP12
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/13/2021 (288331) Analyzed: 12/14/2021 (288406)
Analyte	Result (ug/sample)	RL (ug/sample)
Cobalt	<0.075	0.075



ANALYTICAL REPORT

Workorder: **34-2134424**

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Purchase Order: NA

Project Manager: Stella Hanis

Analytical Results

Sample ID: 12-9-W8-Floor		Collected: 12/09/2021
Lab ID: 2134424008		Received: 12/10/2021
Sampling Location: Quantum Labs		
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP12
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/13/2021 (288331) Analyzed: 12/14/2021 (288406)
Analyte	Result (ug/sample)	RL (ug/sample)
Cobalt	0.13	0.075

Sample ID: 12-9-W9-Floor		Collected: 12/09/2021
Lab ID: 2134424009		Received: 12/10/2021
Sampling Location: Quantum Labs		
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP12
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/13/2021 (288331) Analyzed: 12/14/2021 (288406)
Analyte	Result (ug/sample)	RL (ug/sample)
Cobalt	0.21	0.075

Sample ID: 12-9-W10-Floor		Collected: 12/09/2021
Lab ID: 2134424010		Received: 12/10/2021
Sampling Location: Quantum Labs		
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP12
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/13/2021 (288331) Analyzed: 12/14/2021 (288406)
Analyte	Result (ug/sample)	RL (ug/sample)
Cobalt	0.099	0.075

Sample ID: 12-9-W11-Implanter Roof		Collected: 12/09/2021
Lab ID: 2134424011		Received: 12/10/2021
Sampling Location: Quantum Labs		
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP12
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/13/2021 (288331) Analyzed: 12/14/2021 (288406)
Analyte	Result (ug/sample)	RL (ug/sample)
Cobalt	0.41	0.075



ANALYTICAL REPORT

Workorder: **34-2134424**

Client Project ID: Quantum Labs, San Jose, CA

Purchase Order: NA

Project Manager: Stella Hanis

Analytical Results

Sample ID: 12-9-W12-Implanter Roof		Collected: 12/09/2021
Lab ID: 2134424012	Sampling Location: Quantum Labs	Received: 12/10/2021
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP12
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/13/2021 (288331) Analyzed: 12/14/2021 (288406)
Analyte	Result (ug/sample)	RL (ug/sample)
Cobalt	1.1	0.075

Sample ID: 12-9-W13-Implanter Roof		Collected: 12/09/2021
Lab ID: 2134424013	Sampling Location: Quantum Labs	Received: 12/10/2021
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP12
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/13/2021 (288331) Analyzed: 12/14/2021 (288406)
Analyte	Result (ug/sample)	RL (ug/sample)
Cobalt	0.39	0.075

Sample ID: 12-9-W14-Floor		Collected: 12/09/2021
Lab ID: 2134424014	Sampling Location: Quantum Labs	Received: 12/10/2021
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP12
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/13/2021 (288331) Analyzed: 12/14/2021 (288406)
Analyte	Result (ug/sample)	RL (ug/sample)
Cobalt	0.077	0.075

Sample ID: 12-9-W15-Floor		Collected: 12/09/2021
Lab ID: 2134424015	Sampling Location: Quantum Labs	Received: 12/10/2021
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP12
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/13/2021 (288331) Analyzed: 12/14/2021 (288406)
Analyte	Result (ug/sample)	RL (ug/sample)
Cobalt	<0.075	0.075



ANALYTICAL REPORT

Workorder: **34-2134424**

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Purchase Order: NA

Project Manager: Stella Hanis

Analytical Results

Sample ID: 12-9-W16-Floor		Collected: 12/09/2021
Lab ID: 2134424016		Received: 12/10/2021
Sampling Location: Quantum Labs		
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP12
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/13/2021 (288331) Analyzed: 12/14/2021 (288406)
Analyte	Result (ug/sample)	RL (ug/sample)
Cobalt	0.27	0.075

Sample ID: 12-9-W17-Hanging Lights		Collected: 12/09/2021
Lab ID: 2134424017		Received: 12/10/2021
Sampling Location: Quantum Labs		
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP12
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/13/2021 (288331) Analyzed: 12/14/2021 (288406)
Analyte	Result (ug/sample)	RL (ug/sample)
Cobalt	0.24	0.075

Sample ID: 12-9-W18-Fume Hood		Collected: 12/09/2021
Lab ID: 2134424018		Received: 12/10/2021
Sampling Location: Quantum Labs		
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP12
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/13/2021 (288331) Analyzed: 12/14/2021 (288406)
Analyte	Result (ug/sample)	RL (ug/sample)
Cobalt	0.28	0.075

Sample ID: 12-9-W19-Acid Bench Lights		Collected: 12/09/2021
Lab ID: 2134424019		Received: 12/10/2021
Sampling Location: Quantum Labs		
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP12
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/13/2021 (288331) Analyzed: 12/14/2021 (288406)
Analyte	Result (ug/sample)	RL (ug/sample)
Cobalt	0.86	0.075



ANALYTICAL REPORT

Workorder: **34-2134424**

Client Project ID: Quantum Labs, San Jose, CA
Purchase Order: NA
Project Manager: Stella Hanis

Analytical Results

Sample ID: 12-9-W20-Acid Station Bench		Collected: 12/09/2021
Lab ID: 2134424020	Sampling Location: Quantum Labs	Received: 12/10/2021
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP12
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/13/2021 (288331) Analyzed: 12/14/2021 (288406)
Analyte	Result (ug/sample)	RL (ug/sample)
Cobalt	<0.075	0.075

Sample ID: 12-9-W21-Floor-Cross Hatch		Collected: 12/09/2021
Lab ID: 2134424021	Sampling Location: Quantum Labs	Received: 12/10/2021
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP12
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/13/2021 (288331) Analyzed: 12/14/2021 (288406)
Analyte	Result (ug/sample)	RL (ug/sample)
Cobalt	0.27	0.075

Sample ID: 12-9-W22-Floor-Cross Hatch		Collected: 12/09/2021
Lab ID: 2134424022	Sampling Location: Quantum Labs	Received: 12/10/2021
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP12
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/13/2021 (288331) Analyzed: 12/14/2021 (288406)
Analyte	Result (ug/sample)	RL (ug/sample)
Cobalt	0.089	0.075

Sample ID: 12-9-W23-Cabinet Roof		Collected: 12/09/2021
Lab ID: 2134424023	Sampling Location: Quantum Labs	Received: 12/10/2021
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP12
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/13/2021 (288331) Analyzed: 12/14/2021 (288406)
Analyte	Result (ug/sample)	RL (ug/sample)
Cobalt	0.68	0.075



ANALYTICAL REPORT

Workorder: **34-2134424**

Client Project ID: Quantum Labs, San Jose, CA

Purchase Order: NA

Project Manager: Stella Hanis

Analytical Results

Sample ID: 12-9-FB1-Field Blank		Collected: 12/09/2021
Lab ID: 2134424024	Sampling Location: Quantum Labs	Received: 12/10/2021
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP12
Dilution: 1	Sampling Parameter: Area Not Applicable	Prepared: 12/13/2021 (288331) Analyzed: 12/14/2021 (288406)
Analyte	Result (ug/sample)	RL (ug/sample)
Cobalt	<0.075	0.075

Sample ID: 12-9-FB2-Field Blank		Collected: 12/09/2021
Lab ID: 2134424025	Sampling Location: Quantum Labs	Received: 12/10/2021
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP12
Dilution: 1	Sampling Parameter: Area Not Applicable	Prepared: 12/13/2021 (288331) Analyzed: 12/14/2021 (288406)
Analyte	Result (ug/sample)	RL (ug/sample)
Cobalt	<0.075	0.075

Sample ID: 12-9-W24-Temescal Exhaust Fan		Collected: 12/09/2021
Lab ID: 2134424026	Sampling Location: Quantum Labs	Received: 12/10/2021
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP12
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/13/2021 (288331) Analyzed: 12/14/2021 (288406)
Analyte	Result (ug/sample)	RL (ug/sample)
Cobalt	420	0.075

Report Authorization (/S/ is an electronic signature that complies with 21 CFR Part 11)

Method (Analysis Batch)	Analyst	Peer Review
NIOSH 9102 Mod, Ghost Wipe (288406)	/S/ Rex Bagley 12/14/2021 14:09	/S/ Kristie F. Bitner 12/14/2021 15:32

Laboratory Contact Information

ALS Environmental
960 W Levoy Drive
Salt Lake City, Utah 84123

Phone: (801) 266-7700
Email: als@alst.com
Web: www.alst.com

**ANALYTICAL REPORT**Workorder: **34-2134424**

Client Project ID: Quantum Labs, San Jose, CA

Purchase Order: NA

Project Manager: Stella Hanis

General Lab Comments

The results provided in this report relate only to the items tested.

Samples were received in acceptable condition unless otherwise noted.

The following was provided by the client: Sample ID, Collection Date, Sampling Location, Media Type, Sampling Parameter.

Collection Date, Media Type, and Sampling Parameter can potentially affect the validity of the results.

Samples have not been blank corrected unless otherwise noted.

This test report shall not be reproduced, except in full, without written approval of ALS.

ALS provides professional analytical services for all samples submitted. ALS is not in a position to interpret the data and assumes no responsibility for the quality of the samples submitted.

All quality control samples processed with the samples in this report yielded acceptable results unless otherwise noted.

ALS is accredited for specific fields of testing (scopes) in the following testing sectors. The quality system implemented at ALS conforms to accreditation requirements and is applied to all analytical testing performed by ALS. The following table lists testing sector, accreditation body, accreditation number and website. Please contact these accrediting bodies or your ALS project manager for the current scope of accreditation that applies to your analytical testing.

Testing Sector	Accreditation Body (Standard)	Certificate Number	Website
Environmental	PJLA (DoD ELAP)	L20-57	http://www.pjlabs.com
	PJLA (ISO 17025)	L20-58	http://www.pjlabs.com
Industrial Hygiene	AIHA (ISO 17025 & AIHA IHLAP)	101574	http://www.aihaaccreditedlabs.org
	DOECAP-AP	L20-59	http://www.pjlabs.com
	Washington	C596	https://ecology.wa.gov/Regulations-Permits/Permits-certifications/Laboratory-Accreditation
Dietary Supplements	PJLA (ISO 17025)	L20-58	http://www.pjlabs.com

Definitions

LOD = Limit of Detection = MDL = Method Detection Limit, A statistical estimate of method/media/instrument sensitivity.

LOQ = Limit of Quantitation = RL = Reporting Limit, A verified value of method/media/instrument sensitivity.

ND = Not Detected, Testing result not detected above the LOD or LOQ.

NA = Not Applicable.

** No result could be reported, see sample comments for details.

< Means this testing result is less than the numerical value.

() This testing result is between the LOD and LOQ and has higher analytical uncertainty than values at or above the LOQ.



2134424



ANALYTICAL REQUEST FORM

1. ☐ REGULAR Status☒ RUSH Status Requested - ADDITIONAL CHARGE

RESULTS REQUIRED BY 12-15-21

DATE

CONTACT ALS SALT LAKE PRIOR TO SENDING SAMPLES

2. Date 12/9/21 Purchase Order No.

3. Company Name: AERO-ENVIRONMENTAL CONSULTING

4. Quote No. ALS Project Manager: Stella Hanis

Address: 1426 VIA ISOLA

MONTEREY, CA 93940

Person to Contact: JORGE VIZCAINO

Telephone (831) 277-5831

Fax Telephone ()

E-mail Address: jorge@aero-enviro.com

Billing Address (if different from above)

5. Sample Collection

Sampling Site: QUANTUM LABS, SAN JOSE, CA

Industrial Process: COBALTDECONTAMINATION

Date of Collection: 12/9/2021

Time Collected

Date of Shipment: 12/9/2021

Chain of Custody No.:

6. How did you first learn about ALS?

7. REQUEST FOR ANALYSES

Client Sample Number	Matrix*	Sample/Area Volume	ANALYSES REQUESTED - Use method number if known	Units**	Lab Comments
12-9-W1	Wipe	100cm ²	Cobalt NIOSH 9102	µg/cm ²	- Floor
12-9-W2	"	"	"	"	- Floor
12-9-W3	"	"	"	"	- Floor
12-9-W4	"	"	"	"	- Hood Bay
12-9-W5	"	"	"	"	- MDA 2nd Cabinet
12-9-W6	"	"	"	"	- Hood Cabinet
12-9-W7	"	"	"	"	- Cabinet Shelf
12-9-W8	"	"	"	"	- Floor
12-9-W9	"	"	"	"	- Floor
12-9-W10	"	"	"	"	- Floor
12-9-W11	"	"	"	"	- Imp/inter
12-9-W12	"	"	"	"	- Floor
12-9-W13	"	"	"	"	- Floor
12-9-W14	"	"	"	"	- Floor

* Specify: Solid sorbent tube, e.g. Charcoal; Filter type; Impinger solution; Bulk sample; Blood; Urine; Tissue; Soil; Water; Other

** 1. µg/sample 2. mg/m³ 3. ppm 4. % 5. µg/m³ 6. ____ (other) Please indicate one or more units in the column entitled Units**

Comments

Possible Contamination and/or Chemical Hazards

7. Chain of Custody (Optional)

Relinquished by	Date/Time
Received by	Date/Time
Relinquished by	Date/Time
Received by	Date/Time

960 West LeVoy Drive / Salt Lake City, UT 84123

800-356-9135 or 801-266-7700 / FAX: 801-268-9992
ALS Environmental

For lab use only



ANALYTICAL REQUEST FORM

1. ☐ REGULAR Status☒ RUSH Status Requested - ADDITIONAL CHARGE

RESULTS REQUIRED BY

DATE

CONTACT ALS SALT LAKE PRIOR TO SENDING SAMPLES

2. Date 12/9/21 Purchase Order No.

4. Quote No.

3. Company Name : AERO-ENVIRONMENTAL CONSULTING

ALS Project Manager: Stella Hanis

Address: 1426 VIA ISOLA

5. Sample Collection

MONTEREY, CA 93940

Sampling Site: QUANTUM LABS, SAN JOSE, CA

Person to Contact: JORGE VIZCAINO

Industrial Process: COBALTDECONTAMINATION

Telephone (831) 277-5831

Date of Collection: 12/9/2021

Fax Telephone ()

Time Collected

E-mail Address: jorge@aero-enviro.com

Date of Shipment: 12/9/2021

Billing Address (if different from above)

Chain of Custody No.:

6. How did you first learn about ALS?

7. REQUEST FOR ANALYSES

Client Sample Number	Matrix*	Sample/Area Volume	ANALYSES REQUESTED - Use method number if known	Units**	Lab Comments
12-9-W15	wipe	100cm ²	Cobalt-NPDSH 9102	µg/cm ²	Floor
12-9-W16	"	"	"	"	Floor
12-9-W17	"	"	"	"	- Hanging Light
12-9-W18	"	"	"	"	Fume Hood
12-9-W19	"	"	"	"	- Acid Storage
12-9-W20	"	"	"	"	- Acid Storage
12-9-W21	"	"	"	"	- Floor - Gross Hatch
12-9-W22	"	"	"	"	- Floor - "
12-9-W23	"	"	"	"	- Cabinet Roof
12-9-F01	"	NA	"	"	Field Blank
12-9-F02	"	NA	"	"	"
12-9-W24	"	100cm ²	"	"	Temascal Exhaust

* Specify: Solid sorbent tube, e.g. Charcoal; Filter type; Impinger solution; Bulk sample; Blood; Urine; Tissue; Soil; Water; Other

** 1. µg/sample 2. mg/m³ 3. ppm 4. % 5. µg/m³ 6. ____ (other) Please indicate one or more units in the column entitled Units**

Comments

Possible Contamination and/or Chemical Hazards

7. Chain of Custody (Optional)

Relinquished by	Date/Time
Received by	Date/Time
Relinquished by	Date/Time
Received by	Date/Time

960 West LeVoy Drive / Salt Lake City, UT 84123

800-356-9135 or 801-266-7700 / FAX: 801-268-9992

ALS Environmental



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APPENDIX B-PHOTOGRAPHIC DOCUMENTATION

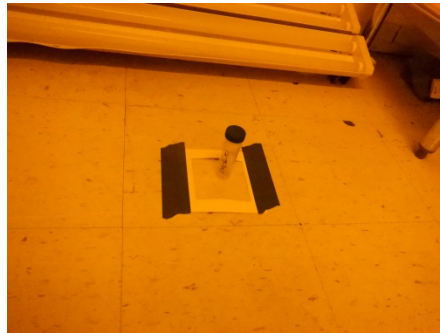


Photo 1-Floor wipe sample



Photo 2-Floor Wipe Sample



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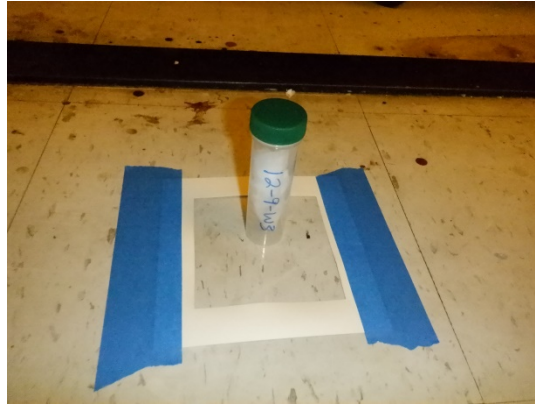


Photo 3-Floor Wipe Sample



Photo 4-Sample collection above fume hood

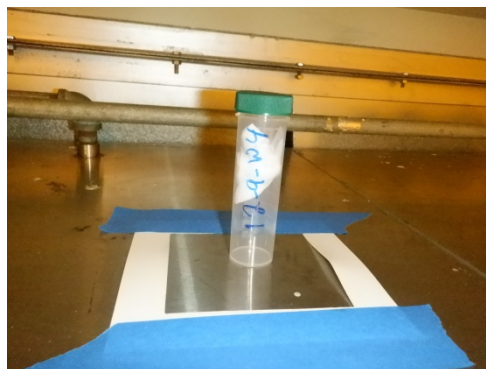


Photo 5-Wipe sample above hood



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Photo 6-Sample collection above equipment cabinet

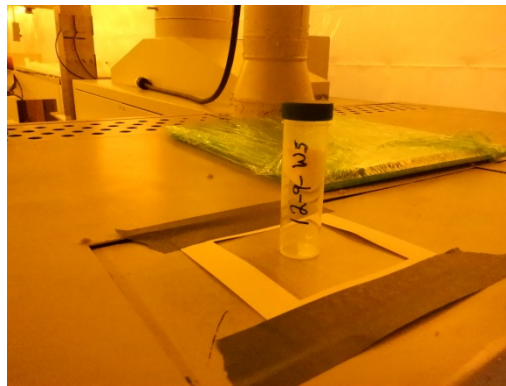


Photo 7-Wipe sample on elevated surface



Photo 8-Wipe sample on elevated surface



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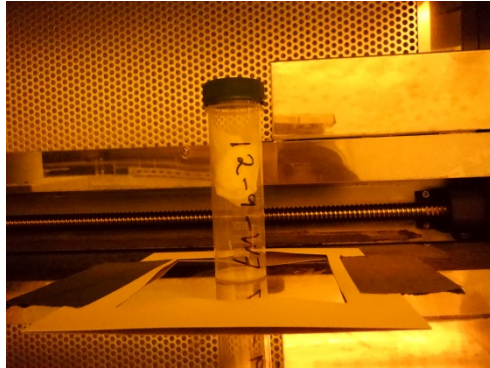


Photo 9-Wipe sample on cabinet shelf



Photo 10-Lab Q Area

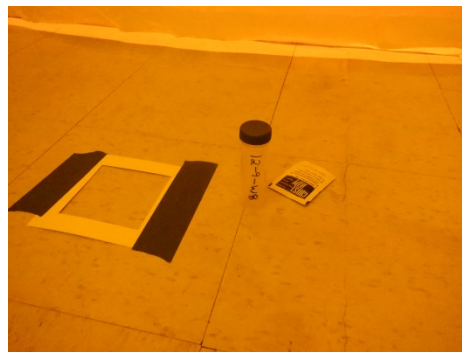


Photo 11-Floor wipe sample



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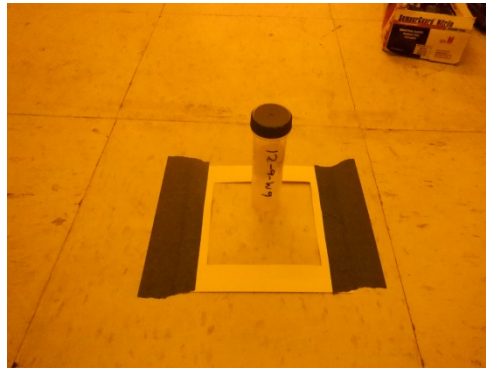


Photo 12-Floor wipe sample

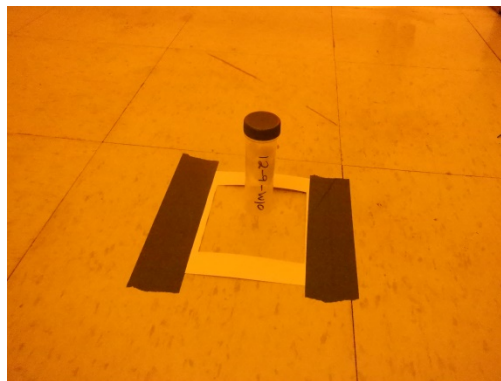


Photo 13-Floor Wipe Sample

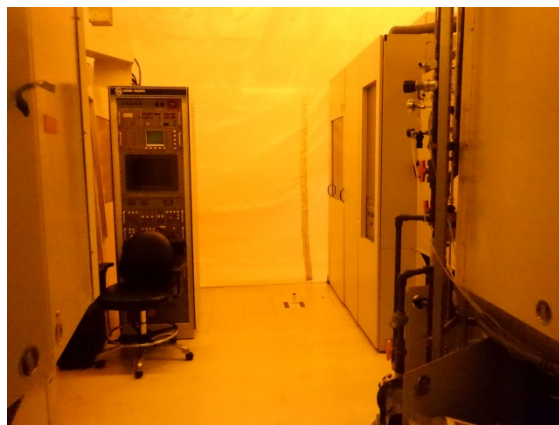


Photo 14-Containment barrier



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Photo 15-Wipe sample on implanter roof



Photo 16-Floor sample



Photo 17-Floor Sample



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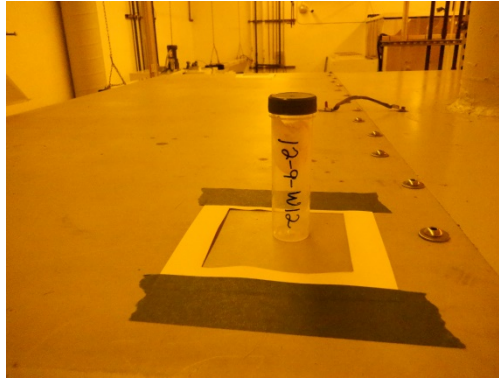


Photo 18-Wipe sample above implanter

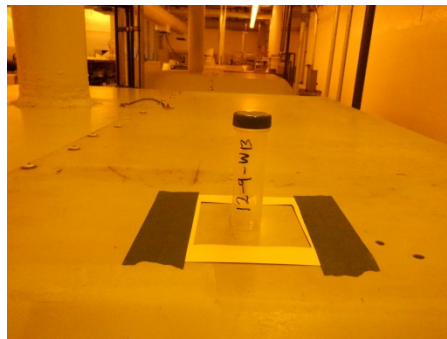


Photo 19-Wipe sample above implanter

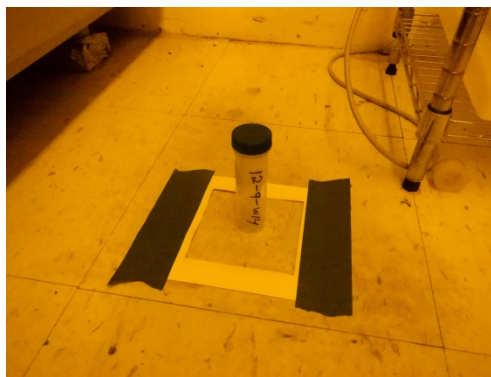


Photo 20-Floor sample near hood area



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Photo 21-Floor sample near hood area

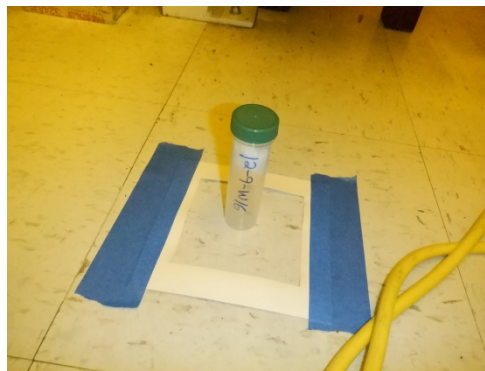


Photo 22-Floor Sample near Hood area

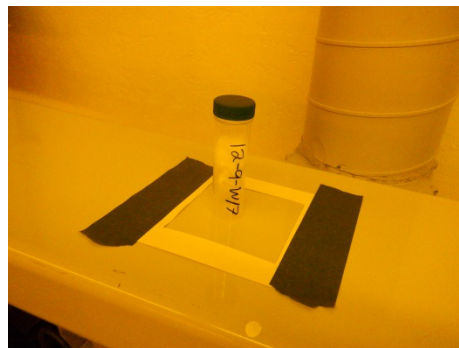


Photo 23-Wipe sample above hanging lights



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Photo 24-Acid Bench area



Photo 25-Wipe sample above hood

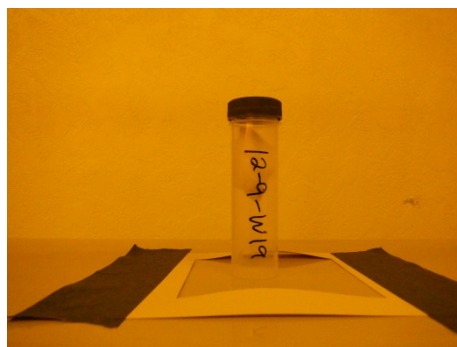


Photo 26-Wipe sample above acid bench lights



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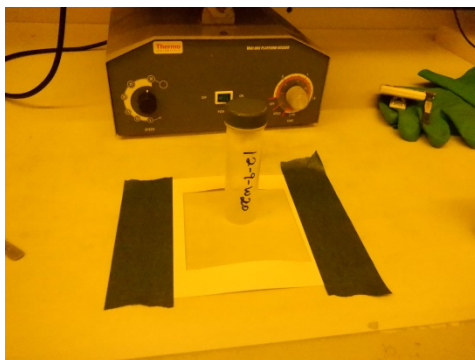


Photo 27-Wipe sample on acid station bench

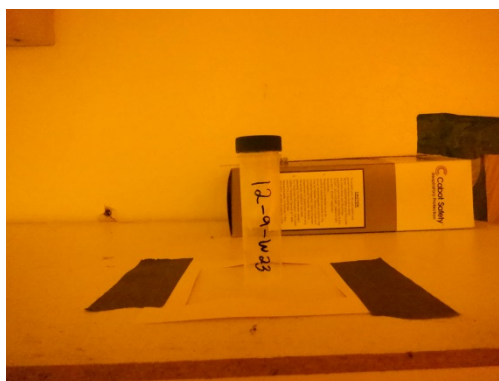


Photo 28-Wipe sample on cabinet roof of cross-hatch area



Photo 29-Floor sample of cross-hatch area



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Photo 30-Wipe sample of cross-hatch area

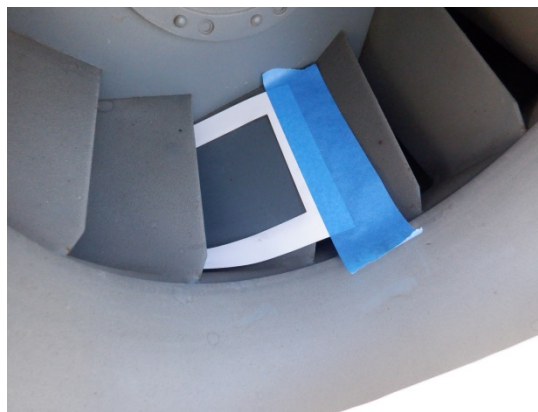


Photo 31-Temescal Exhaust Fan sampling area



Photo 32-Wipe sample of Temescal exhaust fan



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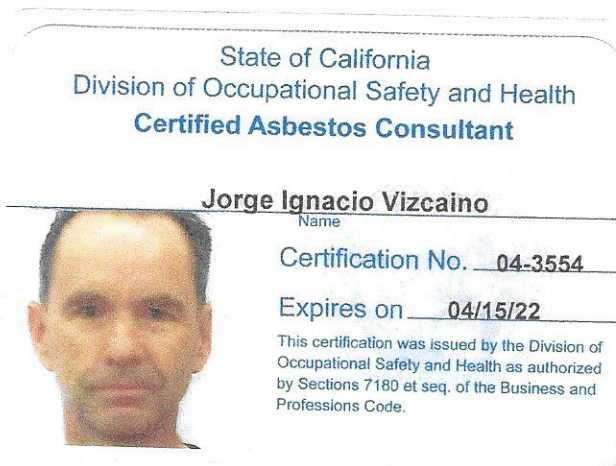


Photo 33-Temescal exhaust fan



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APPENDIX C-PROFESSIONAL CERTIFICATIONS



The Board for Global EHS Credentialing (BGC)

through its vested authority, hereby confirms that

Jorge I. Vizcaino

has met all requirements of education, experience, and examination, and on-going maintenance set forth through the BGC's American Board of Industrial Hygiene®'s (ABIH®) credentialing division for re-certification in the Comprehensive Practice of Industrial Hygiene and is thereby conferred the credential of

Certified Industrial Hygienist® (CIH®)

The aforementioned individual is given all rights, privileges, and responsibilities as both a diplomate of the BGC and holder of the CIH credential, provided that the credential is not suspended or revoked, and it is renewed annually. Moreover, the holder must meet all recertification requirements, including the obligation to practice ethically as prescribed by the BGC.



Credential Number: 9814 CP

Award Date: October 4, 2010

Expiration Date: June 1, 2026

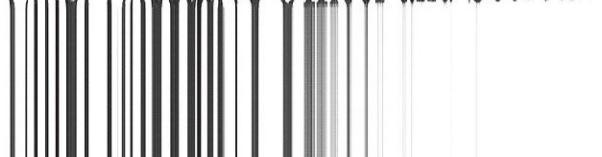
A handwritten signature in blue ink, reading "Cynthia Hanko", is written over a horizontal line.

Cynthia Hanko, CIH
Chair of the Board of Directors



A handwritten signature in blue ink, reading "Ulric K. Chung", is written over a horizontal line.

Ulric K. Chung, MCS, PhD
Chief Executive Officer and Secretary



From: recertinfo@ihmm.org
To: [Jorge Vizcaino](#)
Subject: Congratulations on Recertifying Your CHMM!
Date: Thursday, November 5, 2020 10:38:14 AM

Dear Vizcaino,

Congratulations on successfully recertifying your CHMM credential! Thank you for your continued effort in safety when working with hazardous materials. You are one of the many reasons why this world is a safer place to live. The amount of time you have taken to recertify has not gone unnoticed by the IHMM staff.

Your recertification application has been processed for the cycle ending 10/31/2021. Your new credential expiration date is 10/31/2026.

Please use this electronic copy of your **CHMM Letter of Compliance** as proof of credential and for any third-party verification needs until your presentation copies of your CHMM Letter of Compliance (proof of credential) and Certificate (suitable for display) arrive.

IHMM certifications are the standard of excellence in the hazardous materials industry. As an IHMM credential holder, you can:

- Validate your expertise in many areas
- Distinguish yourself in a competitive marketplace
- Increase your employment options
- Demonstrate ongoing competence
- Expand your professional network
- Benefit from public sector outreach
- Receive global recognition

You are now authorized to continue using your credential designation through the expiration date listed in your *MyIHMM* account online and on your certificate as long as you adhere to the CHMM Code of Ethics, remain in good standing, and maintain all required fees.

Remember to regularly access your *MyIHMM* account to monitor your certification and fee due dates, to maintain your record's accuracy and to keep abreast of certification news. As a Certificant you agree to the proper use of the logo and acronym designation, and to surrender the certificate in the event of withdrawal of certification by IHMM.

We appreciate your continued support of IHMM and your commitment to the professional excellence embodied in your credential.

Sincerely,



Gene Guilford
Executive Director



Institute of Hazardous Materials Management
9210 Corporate Blvd., Suite 470 | Rockville, MD 20850
(301) 984-8969 | (301) 984-1516 fax





STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC HEALTH



LEAD-RELATED CONSTRUCTION CERTIFICATE

INDIVIDUAL:



Jorge Vizcaino

CERTIFICATE TYPE:

Lead Inspector/Assessor

NUMBER:

LRC-00001930

EXPIRATION DATE:

11/3/2022

Disclaimer: This document alone should not be relied upon to confirm certification status. Compare the individual's photo and name to another valid form of government issued photo identification. Verify the individual's certification status by searching for Lead-Related Construction Professionals at www.cdph.ca.gov/programs/clppb or calling (800) 597-LEAD.





STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC HEALTH



LEAD-RELATED CONSTRUCTION CERTIFICATE

INDIVIDUAL:



David Kummer

CERTIFICATE TYPE:

Lead Sampling Technician

NUMBER:

LRC-00007343

EXPIRATION DATE:

10/27/2022

Disclaimer: This document alone should not be relied upon to confirm certification status. Compare the individual's photo and name to another valid form of government issued photo identification. Verify the individual's certification status by searching for Lead-Related Construction Professionals at www.cdph.ca.gov/programs/clppb or calling (800) 597-LEAD.



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Evaluation of Cobalt 59 Airborne and Surface Dust Contamination during interior Cobalt cleanup operations at Quantum Labs, San Jose, California

Date Inspection Conducted:	12/14/2021
Date of Report:	12/17/2021
Assignment:	Decontamination Oversight, Air Monitoring, and Surface Contamination Evaluation of interior office areas, restrooms, storage room, test lab, and break room at Quantum Labs
Address of Evaluation	QUANTUM LABS- 2108 Bering Dr., Suite B, San Jose, CA
Work Performed By:	Jorge Vizcaino, CIH 9814
Aero-Environmental Project Name:	QUANTUM LABS-Cobalt Decontamination Monitoring

QUANTUM LABS
2108 BERING DR. UNIT B
SAN JOSE, CA 95131

Highlights of this Cobalt 59 Decontamination Oversight and Monitoring Evaluation

Evaluation of Cobalt 59 Dust Exposures, Surface Contamination, and Cobalt 59 Airborne Concentrations at Quantum Labs, San Jose, California.

On December 14th, 2021, Aero-Environmental Certified Industrial Hygienist (CIH 9814) Jorge Vizcaino, and Industrial Hygiene Technician David Kummer (LRC-00007343) conducted a cobalt surface contamination assessment and air monitoring at Quantum Labs.

What Aero-Environmental Did

- We conducted a visual evaluation of interior office areas, restrooms, storage room, test lab, and break room.
- We collected representative area air samples air samples inside the above interior areas.



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- We collected surface wipe samples of selected surfaces in the interior office and support work areas, such as restrooms, break room, reception area, and conference room.
- We collected one micro-vacuum (micro-vac) sample using an air sampling pump and MCE cassette of the carpet adjacent to Simon's office bookshelf.
- We communicated with the Belfor Environmental project manager and Quantum Labs any issues of concern.

What We Found

- Analytical results for the surface wipe samples indicated cobalt surface concentrations below the BNL "Free Release" Clearance Level of 2 $\mu\text{g}/100\text{ cm}^2$ in all of the wipe samples collected.
- Results from the micro-vac sample of the carpet indicated a concentration of 20 $\mu\text{g}/\text{sample}$ collected over a 100 cm^2 sample area.
- Results from the area air samples were all below the analytical detection limit of 0.075 $\mu\text{g}/\text{sample}$ and below the California Permissible Exposure Limit (PEL) of 0.02 mg/m^3 . All air sample results had a concentration of $<0.00030\text{ mg}/\text{m}^3$.

What Aero-Environmental Recommends

- The entire carpet should be completely covered with 2 layers of 6 mil plastic barrier and all furniture items in these office/support areas should be removed prior to the removal of the carpet.
- Based on these analytical lab results the entire carpet of these office areas in Suite B should be discarded as hazardous waste in an appropriately designated landfill.
- Once this has been completed, a final wipe down and HEPA vacuuming of all of these areas should be conducted and a final surface wipe clearance should be conducted.

Abbreviations

cm^2	Square centimeter
$\mu\text{g}/100\text{ cm}^2$	Micrograms per 100 square centimeters
mg/m^3	Milligrams per cubic meter
ABIH®	American Board of Industrial Hygienists
ACGIH®	American Conference of Governmental Industrial Hygienists
BNL	Brookhaven National Lab
CAL-OSHA	California Occupational Safety and Health Administration



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CIH	Certified Industrial Hygienist
CFR	Code of Federal Regulations
CCR	California Code of Regulations
HEPA	High Efficiency Particulate Air
NIOSH	National Institute of Occupational Safety and Health
PPE	Personal Protective Equipment
OEL	Occupational Exposure Level
PBZ	Personal Breathing Zone
ppb	Parts per billion
ppm	Parts per million
PEL	Permissible exposure limit
PPE	Personal Protective Equipment
TWA	Time-weighted average

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Summary

On December 14th 2021, Aero-Environmental Certified Industrial Hygienist (CIH 9814) Jorge Vizcaino, and Industrial Hygiene Technician David Kummer (LRC-00007343) conducted a cobalt surface and air sampling evaluation of all office, restrooms, break rooms, test lab, reception area, and conference room at Quantum Labs.

Four (4) area air samples for cobalt dust and one micro-vacuum dust sample (carpet sample) were collected. The location of the air samples included Simon Planck's office, Engineering office, Conference Room/Reception Area.

In addition, a total of fourteen (14) surface wipe samples were collected during this assessment to determine surface cobalt dust concentrations prior to removal of the carpet. All of the wipe samples analytical results were below the analytical detection limit or below the BNL "Free Release" Clearance Level of 2 $\mu\text{g}/100\text{ cm}^2$.

Air sampling results indicated that exposures to cobalt dust were all below the analytical detection limit and below the California Permissible Exposure Limit (PEL) of 0.02 mg/m^3 .

Introduction

In October, 2021, Aero-Environmental received request from Quantum Labs to conduct cobalt decontamination oversight and monitoring activities at Quantum Labs in San Jose, California. The request was made to ensure that the appropriate cobalt decontamination work practices were being followed, and therefore not potentially exposing workers and personnel in this industrial building or adjacent offices to Cobalt 59 dust.

On December 14th 2021, Aero-Environmental Certified Industrial Hygienist (CIH 9814) Jorge Vizcaino, and Industrial Hygiene Technician David Kummer (LRC-00007343) conducted a cobalt surface and air sampling evaluation of all office, restrooms, break rooms, test lab, reception area, and conference room at Quantum Labs.



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Methods

Aero-Environmental Consulting conducted the following activities:

- 1) Conducted a visual evaluation of interior office areas, restrooms, storage room, test lab, and break room.
- 2) We collected representative area air samples air samples inside the above interior areas.
- 3) We collected surface wipe samples of selected surfaces in the interior office and support work areas, such as restrooms, break room, reception area, and conference room.
- 4) We collected one micro-vacuum (micro-vac) sample using an air sampling pump and MCE cassette of the carpet adjacent to Simon's office bookshelf.
- 5) We communicated with the Belfor Environmental project manager and Quantum Labs any issues of concern.

TABLE 1-AIR/SURFACE SAMPLING METHODS		
Substance	Reason for Sampling	Sampling Methods
Airborne Cobalt Dust	Possible Exposure during cobalt decontamination activities	NIOSH Method 7300
Surface Cobalt Dust	Possible Exposure during cobalt decontamination activities	NIOSH Method 9102

Evaluation Criteria

The primary sources of environmental evaluation criteria for the workplace are: (1) NIOSH Recommended Exposure Limits (RELs), (2) the American Conference of Governmental Industrial Hygienists' (ACGIH®) Threshold Limit Values (TLVs®) and (3) the Division of Industrial Relations, California Occupational Safety and Health



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Administration (Cal/OSHA) Permissible Exposure Limits (PELs). Employers are encouraged to follow the NIOSH RELs, the ACGIH TLVs, or the Cal/OSHA PELs, whichever are the more protective criteria.

Cal/OSHA requires an employer to furnish employees a place of employment that is free from recognized hazards that are causing or are likely to cause death or serious physical harm. Thus, employers should understand that not all hazardous chemicals have specific Cal/OSHA exposure limits such as PELs and short-term exposure limits (STELs). An employer is still required by Cal/OSHA to protect their employees from hazards, even in the absence of a specific OSHA PEL.

A time-weighted average (TWA) exposure refers to the average airborne concentration of a substance during a normal 8- to 10-hour workday. Some substances have recommended STEL or ceiling values which are intended to supplement the TWA where there are recognized toxic effects from higher exposures over the short-term.

Results

Analytical results for the surface wipe samples indicated cobalt surface concentrations below the BNL "Free Release" Clearance Level of $2 \mu\text{g}/100 \text{ cm}^2$ in all of the wipe samples collected.

Results from the micro-vac sample of the carpet indicated a concentration of $20 \mu\text{g}/\text{sample}$ collected over a 100 cm^2 sample area.

Results from the area air samples were all below the analytical detection limit of $0.075 \mu\text{g}/\text{sample}$ and below the California Permissible Exposure Limit (PEL) of $0.02 \text{ mg}/\text{m}^3$. All air sample results had a concentration of $<0.00030 \text{ mg}/\text{m}^3$.

TABLE 2-Summary of Air Sample results for airborne Cobalt and Surface Wipe Sample Results

Sample #/Date	Personal/Area	Concentration
12-14-W1-Dec 14	Clean Room Test Lab Bench	$<0.075 \mu\text{g}/100\text{cm}^2$
12-14-W2-Dec 14	Clean Room Test Lab Floor	$0.13 \mu\text{g}/100\text{cm}^2$



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12-14-W4-Dec 14	Simon's Office-Desk	<0.075 $\mu\text{g}/100\text{cm}^2$
12-14-W5-Dec 14	Simon's Office-Bookshelf	0.49 $\mu\text{g}/100\text{cm}^2$
12-14-W6-Dec 14	Engineering Office-Bookshelf	<0.075 $\mu\text{g}/100\text{cm}^2$
12-14-W7-Dec 14	Engineering Office-Bookshelf	<0.075 $\mu\text{g}/100\text{cm}^2$
12-14-W8-Dec 14	Break Room-Microwave table	0.17 $\mu\text{g}/100\text{cm}^2$
12-14-W9-Dec 14	Break Room-Floor	<0.075 $\mu\text{g}/100\text{cm}^2$
12-14-W10-Dec 14	Restroom Floor	<0.075 $\mu\text{g}/100\text{cm}^2$
12-14-W11-Dec 14	Restroom Lobby Floor	0.22 $\mu\text{g}/100\text{cm}^2$
12-14-W12-Dec 14	Reception-Desk	<0.075 $\mu\text{g}/100\text{cm}^2$
12-14-W13-Dec 14	Restroom-Vanity	<0.075 $\mu\text{g}/100\text{cm}^2$
12-14-W14-Dec 14	Conference Room-Table	<0.075 $\mu\text{g}/100\text{cm}^2$
12-14-FB-Dec 14	Field Blank	NA
12-14-MV1-Dec 14	Simon's Office Carpet	20 $\mu\text{g}/\text{sample}$
12-14-A1-Dec 14	Simon's Office	<0.00030 mg/m^3
12-14-A2-Dec 14	Simon's Office	<0.00030 mg/m^3
12-14-A3-Dec 14	Engineering Office	<0.00030 mg/m^3
12-14-A4-Dec 14	Lobby/Reception	<0.00030 mg/m^3

Conclusions and Recommendations

This cobalt dust evaluation indicated that all air sampling results for airborne cobalt dust were below applicable the analytical detection limit and did not indicate an airborne hazard to the decontamination workers or any other office occupants at this time. The California PEL is 0.02 mg/m^3 for airborne cobalt dust.



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However, this dust evaluation did indicate cobalt dust contamination of the carpet in Simon Planck's office. Therefore, all carpeted office areas should have the carpet removed and discarded as hazardous waste as this material is extremely porous and is a potential source of cobalt contamination.

A final surface wipe clearance of these office areas should be conducted following carpet removal and final decontamination.

This report serves as a weekly monitoring assessment report for this decontamination project at Quantum Labs.

Availability of Report/Disclaimer

The recommendations in this report are made on the basis of the findings at the workplace evaluated and may not be applicable to other workplaces. This report was prepared by Jorge Vizcaino, CIH/CHMM with Aero-Environmental Consulting, INC. Analytical support was provided by AIHA Accredited Laboratory ALS Environmental in Salt Lake City, Utah.

Sincerely,
Aero-Environmental Consulting, INC

A handwritten signature in black ink, appearing to read 'Jorge Vizcaino'.

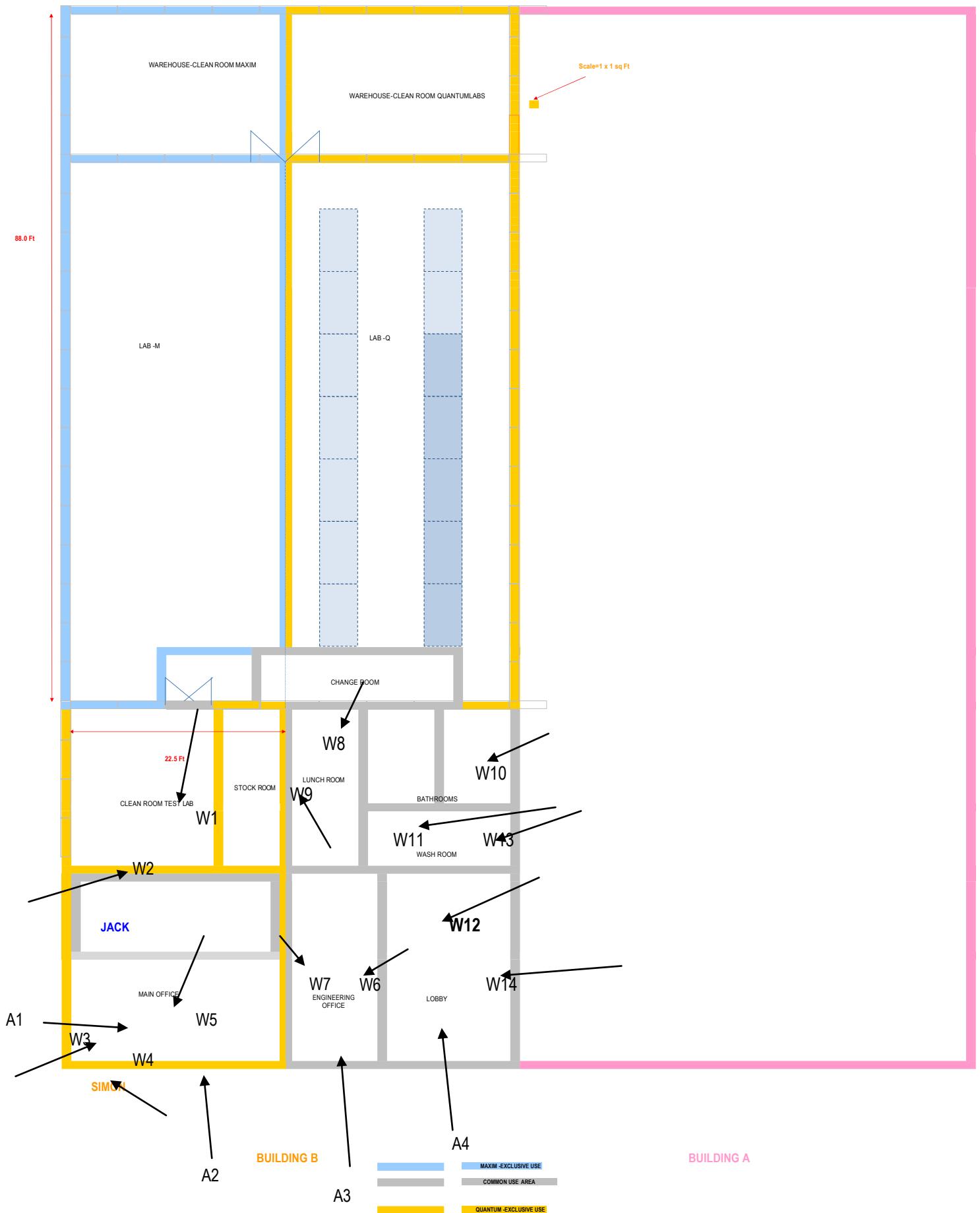
Jorge Vizcaino
Certified Industrial Hygienist No. 9814
Certified Hazardous Material Manager 19631





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FIGURE 1 -FLOOR PLAN WITH WIPE SAMPLING LOCATIONS





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APPENDIX A-Analytical Results



ANALYTICAL REPORT

Report Date: December 17, 2021

Jorge Vizcaino
Aero-Environmental Consulting
1426 Via Isola
Monterey, CA 93940

Phone: (831) 277-5831

E-mail: jorge@aero-enviro.com

Workorder: **34-2134986**

Client Project ID: Quantum Labs, San Jose, CA
Purchase Order: NA
Project Manager: Stella Hanis

Analytical Results

Sample ID: 12-14-A1-Simon's Office		Collected: 12/14/2021	
Lab ID: 2134986001		Received: 12/15/2021	
Sampling Location: Quantum Labs, San Jo			
Method: NIOSH 7300 Mod., MCE	Media: MCE Filter	Instrument: ICP13	
Dilution: 1	Sampling Parameter: Air Volume 250 L	Prepared: 12/15/2021 (288460)	
		Analyzed: 12/16/2021 (288514)	
Analyte	Result (ug/sample)	Result (mg/m ³)	RL (ug/sample)
Cobalt	<0.075	<0.00030	0.075

Sample ID: 12-14-A2-Simon's Office		Collected: 12/14/2021	
Lab ID: 2134986002		Received: 12/15/2021	
Sampling Location: Quantum Labs, San Jo			
Method: NIOSH 7300 Mod., MCE	Media: MCE Filter	Instrument: ICP13	
Dilution: 1	Sampling Parameter: Air Volume 250 L	Prepared: 12/15/2021 (288460)	
		Analyzed: 12/16/2021 (288514)	
Analyte	Result (ug/sample)	Result (mg/m ³)	RL (ug/sample)
Cobalt	<0.075	<0.00030	0.075

Sample ID: 12-14-A3-Engineering Office		Collected: 12/14/2021	
Lab ID: 2134986003		Received: 12/15/2021	
Sampling Location: Quantum Labs, San Jo			
Method: NIOSH 7300 Mod., MCE	Media: MCE Filter	Instrument: ICP13	
Dilution: 1	Sampling Parameter: Air Volume 250 L	Prepared: 12/15/2021 (288460)	
		Analyzed: 12/16/2021 (288514)	
Analyte	Result (ug/sample)	Result (mg/m ³)	RL (ug/sample)
Cobalt	<0.075	<0.00030	0.075



ANALYTICAL REPORT

Workorder: **34-2134986**

Client Project ID: Quantum Labs, San Jose, CA

Purchase Order: NA

Project Manager: Stella Hanis

Analytical Results

Sample ID: 12-14-A4-Lobby/Reception		Collected: 12/14/2021	
Lab ID: 2134986004		Received: 12/15/2021	
Method: NIOSH 7300 Mod., MCE		Instrument: ICP13	
Dilution: 1		Prepared: 12/15/2021 (288460)	
Media: MCE Filter		Analyzed: 12/16/2021 (288514)	
Sampling Parameter: Air Volume 250 L			
Sampling Location: Quantum Labs, San Jo			
Analyte	Result (ug/sample)	Result (mg/m ³)	RL (ug/sample)
Cobalt	<0.075	<0.00030	0.075

Sample ID: 12-14-W1-Clean Room Test Lab		Collected: 12/14/2021	
Lab ID: 2134986005		Received: 12/15/2021	
Method: NIOSH 9102 Mod, Ghost Wipe		Instrument: ICP13	
Dilution: 1		Prepared: 12/15/2021 (288459)	
Media: Ghost Wipe		Analyzed: 12/16/2021 (288514)	
Sampling Parameter: Area 100 cm ²			
Sampling Location: Quantum Labs SanJose			
Analyte	Result (ug/sample)	Result (ug/100cm ²)	RL (ug/sample)
Cobalt	<0.075	<0.075	0.075

Sample ID: 12-14-W2-Clean Room Test Lab		Collected: 12/14/2021	
Lab ID: 2134986006		Received: 12/15/2021	
Method: NIOSH 9102 Mod, Ghost Wipe		Instrument: ICP13	
Dilution: 1		Prepared: 12/15/2021 (288459)	
Media: Ghost Wipe		Analyzed: 12/16/2021 (288514)	
Sampling Parameter: Area 100 cm ²			
Sampling Location: Quantum Labs SanJose			
Analyte	Result (ug/sample)	Result (ug/100cm ²)	RL (ug/sample)
Cobalt	0.13	0.13	0.075

Sample ID: 12-14-W3-Office Desk-Simon's Office		Collected: 12/14/2021	
Lab ID: 2134986007		Received: 12/15/2021	
Method: NIOSH 9102 Mod, Ghost Wipe		Instrument: ICP13	
Dilution: 1		Prepared: 12/15/2021 (288459)	
Media: Ghost Wipe		Analyzed: 12/16/2021 (288514)	
Sampling Parameter: Area 100 cm ²			
Sampling Location: Quantum Labs SanJose			
Analyte	Result (ug/sample)	Result (ug/100cm ²)	RL (ug/sample)
Cobalt	<0.075	<0.075	0.075



ANALYTICAL REPORT

Workorder: **34-2134986**

Client Project ID: Quantum Labs, San Jose, CA
Purchase Order: NA
Project Manager: Stella Hanis

Analytical Results

Sample ID: 12-14-W4-Office Desk-Simon's Office			Collected: 12/14/2021
Lab ID: 2134986008		Sampling Location: Quantum Labs SanJose	Received: 12/15/2021
Method: NIOSH 9102 Mod, Ghost Wipe		Media: Ghost Wipe	Instrument: ICP13
Dilution: 1	Sampling Parameter: Area 100 cm ²		Prepared: 12/15/2021 (288459) Analyzed: 12/16/2021 (288514)
Analyte	Result (ug/sample)	Result (ug/100cm ²)	RL (ug/sample)
Cobalt	<0.075	<0.075	0.075

Sample ID: 12-14-W5-Bookshelf-Simon's Office			Collected: 12/14/2021
Lab ID: 2134986009		Sampling Location: Quantum Labs SanJose	Received: 12/15/2021
Method: NIOSH 9102 Mod, Ghost Wipe		Media: Ghost Wipe	Instrument: ICP13
Dilution: 1	Sampling Parameter: Area 100 cm ²		Prepared: 12/15/2021 (288459) Analyzed: 12/16/2021 (288514)
Analyte	Result (ug/sample)	Result (ug/100cm ²)	RL (ug/sample)
Cobalt	0.49	0.49	0.075

Sample ID: 12-14-W6-Engineering Office			Collected: 12/14/2021
Lab ID: 2134986010		Sampling Location: Quantum Labs SanJose	Received: 12/15/2021
Method: NIOSH 9102 Mod, Ghost Wipe		Media: Ghost Wipe	Instrument: ICP13
Dilution: 1	Sampling Parameter: Area 100 cm ²		Prepared: 12/15/2021 (288459) Analyzed: 12/16/2021 (288514)
Analyte	Result (ug/sample)	Result (ug/100cm ²)	RL (ug/sample)
Cobalt	<0.075	<0.075	0.075

Sample ID: 12-14-W7-Engineering Office			Collected: 12/14/2021
Lab ID: 2134986011		Sampling Location: Quantum Labs SanJose	Received: 12/15/2021
Method: NIOSH 9102 Mod, Ghost Wipe		Media: Ghost Wipe	Instrument: ICP13
Dilution: 1	Sampling Parameter: Area 100 cm ²		Prepared: 12/15/2021 (288459) Analyzed: 12/16/2021 (288514)
Analyte	Result (ug/sample)	Result (ug/100cm ²)	RL (ug/sample)
Cobalt	<0.075	<0.075	0.075



ANALYTICAL REPORT

Workorder: **34-2134986**

Client Project ID: Quantum Labs, San Jose, CA
Purchase Order: NA
Project Manager: Stella Hanis

Analytical Results

Sample ID: 12-14-W8-Break Room		Collected: 12/14/2021	
Lab ID: 2134986012		Received: 12/15/2021	
Sampling Location: Quantum Labs SanJose			
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP13	
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/15/2021 (288459)	
		Analyzed: 12/16/2021 (288514)	
Analyte	Result (ug/sample)	Result (ug/100cm ²)	RL (ug/sample)
Cobalt	0.17	0.17	0.075

Sample ID: 12-14-W9-Break Room		Collected: 12/14/2021	
Lab ID: 2134986013		Received: 12/15/2021	
Sampling Location: Quantum Labs SanJose			
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP13	
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/15/2021 (288459)	
		Analyzed: 12/16/2021 (288514)	
Analyte	Result (ug/sample)	Result (ug/100cm ²)	RL (ug/sample)
Cobalt	<0.075	<0.075	0.075

Sample ID: 12-14-W10-Men's Room		Collected: 12/14/2021	
Lab ID: 2134986014		Received: 12/15/2021	
Sampling Location: Quantum Labs SanJose			
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP13	
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/15/2021 (288459)	
		Analyzed: 12/16/2021 (288514)	
Analyte	Result (ug/sample)	Result (ug/100cm ²)	RL (ug/sample)
Cobalt	<0.075	<0.075	0.075

Sample ID: 12-14-W11-Restroom Lobby		Collected: 12/14/2021	
Lab ID: 2134986015		Received: 12/15/2021	
Sampling Location: Quantum Labs SanJose			
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP13	
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/15/2021 (288459)	
		Analyzed: 12/16/2021 (288514)	
Analyte	Result (ug/sample)	Result (ug/100cm ²)	RL (ug/sample)
Cobalt	0.22	0.22	0.075



ANALYTICAL REPORT

Workorder: **34-2134986**

Client Project ID: Quantum Labs, San Jose, CA

Purchase Order: NA

Project Manager: Stella Hanis

Analytical Results

Sample ID: 12-14-W12-Lobby/Reception		Collected: 12/14/2021	
Lab ID: 2134986016		Received: 12/15/2021	
Sampling Location: Quantum Labs SanJose			
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP13	
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/15/2021 (288459)	
		Analyzed: 12/16/2021 (288514)	
Analyte	Result (ug/sample)	Result (ug/100cm ²)	RL (ug/sample)
Cobalt	<0.075	<0.075	0.075

Sample ID: 12-14-W13-Restroom Vanity		Collected: 12/14/2021	
Lab ID: 2134986017		Received: 12/15/2021	
Sampling Location: Quantum Labs SanJose			
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP13	
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/15/2021 (288459)	
		Analyzed: 12/16/2021 (288514)	
Analyte	Result (ug/sample)	Result (ug/100cm ²)	RL (ug/sample)
Cobalt	<0.075	<0.075	0.075

Sample ID: 12-14-W14-Conference Room		Collected: 12/14/2021	
Lab ID: 2134986018		Received: 12/15/2021	
Sampling Location: Quantum Labs SanJose			
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP13	
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/15/2021 (288459)	
		Analyzed: 12/16/2021 (288514)	
Analyte	Result (ug/sample)	Result (ug/100cm ²)	RL (ug/sample)
Cobalt	<0.075	<0.075	0.075

Sample ID: Field Blank		Collected: 12/14/2021	
Lab ID: 2134986019		Received: 12/15/2021	
Sampling Location: Quantum Labs SanJose			
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP13	
Dilution: 1	Sampling Parameter: Area Not Applicable	Prepared: 12/15/2021 (288459)	
		Analyzed: 12/16/2021 (288514)	
Analyte	Result (ug/sample)	Result (ug/100cm ²)	RL (ug/sample)
Cobalt	<0.075	NA	0.075



ANALYTICAL REPORT

Workorder: **34-2134986**

Client Project ID: Quantum Labs, San Jose, CA
Purchase Order: NA
Project Manager: Stella Hanis

Analytical Results

Sample ID: 12-14-MV1-Simon's Office Carpet		Collected: 12/14/2021	
Lab ID: 2134986020		Received: 12/15/2021	
Method: NIOSH 7300 Mod., MCE		Instrument: ICP13	
Dilution: 1		Prepared: 12/15/2021 (288460)	
Media: MCE Filter		Analyzed: 12/16/2021 (288514)	
Sampling Parameter: Air Volume Not Provided			
Sampling Location: Quantum Labs SanJose			
Analyte	Result (ug/sample)	Result (mg/m³)	RL (ug/sample)
Cobalt	20	NA	0.075

Report Authorization (/S/ is an electronic signature that complies with 21 CFR Part 11)

Method (Analysis Batch)	Analyst	Peer Review
NIOSH 7300 Mod., MCE (288514)	/S/ Rex Bagley 12/16/2021 14:23	/S/ Kristie F. Bitner 12/17/2021 08:10
NIOSH 9102 Mod, Ghost Wipe (288514)	/S/ Rex Bagley 12/16/2021 14:23	/S/ Kristie F. Bitner 12/17/2021 08:10

Laboratory Contact Information

ALS Environmental
960 W Levoe Drive
Salt Lake City, Utah 84123

Phone: (801) 266-7700
Email: alslt.lab@ALSGlobal.com
Web: www.alssl.com

General Lab Comments

The results provided in this report relate only to the items tested.
Samples were received in acceptable condition unless otherwise noted.
The following was provided by the client: Sample ID, Collection Date, Sampling Location, Media Type, Sampling Parameter.
Collection Date, Media Type, and Sampling Parameter can potentially affect the validity of the results.
Samples have not been blank corrected unless otherwise noted.
This test report shall not be reproduced, except in full, without written approval of ALS.

ALS provides professional analytical services for all samples submitted. ALS is not in a position to interpret the data and assumes no responsibility for the quality of the samples submitted.

All quality control samples processed with the samples in this report yielded acceptable results unless otherwise noted.

ALS is accredited for specific fields of testing (scopes) in the following testing sectors. The quality system implemented at ALS conforms to accreditation requirements and is applied to all analytical testing performed by ALS. The following table lists testing sector, accreditation body, accreditation number and website. Please contact these accrediting bodies or your ALS project manager for the current scope of accreditation that applies to your analytical testing.

Testing Sector	Accreditation Body (Standard)	Certificate Number	Website
Environmental	PJLA (DoD ELAP)	L20-57	http://www.pjllabs.com
	PJLA (ISO 17025)	L20-58	http://www.pjllabs.com
Industrial Hygiene	AIHA (ISO 17025 & AIHA IHLAP)	101574	http://www.aihaaccreditedlabs.org
	DOECAP-AP	L20-59	http://www.pjllabs.com
	Washington	C596	https://ecology.wa.gov/Regulations-Permits/Permits-certifications/Laboratory-Accreditation
Dietary Supplements	PJLA (ISO 17025)	L20-58	http://www.pjllabs.com



ANALYTICAL REPORT

Workorder: **34-2134986**

Client Project ID: Quantum Labs, San Jose, CA

Purchase Order: NA

Project Manager: Stella Hanis

Definitions

LOD = Limit of Detection = MDL = Method Detection Limit, A statistical estimate of method/media/instrument sensitivity.

LOQ = Limit of Quantitation = RL = Reporting Limit, A verified value of method/media/instrument sensitivity.

ND = Not Detected, Testing result not detected above the LOD or LOQ.

NA = Not Applicable.

** No result could be reported, see sample comments for details.

< Means this testing result is less than the numerical value.

() This testing result is between the LOD and LOQ and has higher analytical uncertainty than values at or above the LOQ.



2134986



ANALYTICAL REQUEST FORM

1. ☐ REGULAR Status

RUSH Status Requested - ADDITIONAL CHARGE

RESULTS REQUIRED BY

DATE

CONTACT ALS SALT LAKE PRIOR TO SENDING SAMPLES

2. Date 12/9/21 Purchase Order No.

4. Quote No.

3. Company Name : AERO-ENVIRONMENTAL CONSULTING

ALS Project Manager: Stella Hanis

Address: 1426 VIA ISOLA

5. Sample Collection

MONTEREY, CA 93940

Sampling Site: QUANTUM LABS, SAN JOSE, CA

Person to Contact: JORGE VIZCAINO

Industrial Process: COBALTDECONTAMINATION

Telephone (831) 277-5831

Date of Collection: 12/14/2021

Fax Telephone ()

Time Collected

E-mail Address: jorge@aero-enviro.com

Date of Shipment: 12/14/2021

Billing Address (if different from above)

Chain of Custody No.:

6. How did you first learn about ALS?

7. REQUEST FOR ANALYSES

Client Sample Number	Matrix*	Sample/Area Volume	ANALYSES REQUESTED - Use method number if known	Units**	Lab Comments
12-14-A1	Air	250L	Cobalt/NIOSH 7300	mg/m ³	Simon's office
12-14-A2	Air	250L	"	"	"
12-14-A3	Air	250L	"	"	Engineering Office
12-14-A4	Air	250L	"	"	Lobby/Reception
12-14-W1	Wipe	100cm ²	Cobalt/NIOSH 9102	ug/cm ²	Clean Room/Test Lab
12-14-W2	"	"	"	"	"
12-14-W3	"	"	"	"	Office Desk
12-14-W4	"	"	"	"	"
12-14-W5	"	"	"	"	Backdraft - Simon's office
12-14-W6	"	"	"	"	Engineering Office
12-14-W7	"	"	"	"	"
12-14-W8	"	"	"	"	Break Room
12-14-W9	"	"	"	"	"
12-14-W10	"	"	"	"	Mens Room

Specify: Solid sorbent tube, e.g. Charcoal; Filter type; Impinger solution; Bulk sample; Blood; Urine; Tissue; Soil; Water; Other

** 1. ug/sample 2. mg/m³ 3. ppm 4. % 5. ug/m³ 6. _____ (other) Please indicate one or more units in the column entitled Units**

Comments

Possible Contamination and/or Chemical Hazards

7. Chain of Custody (Optional)

Relinquished by	Date/Time
Received by	Date/Time
Relinquished by	Date/Time
Received by	Date/Time

960 West LeVoy Drive / Salt Lake City, UT 84123

800-356-9135 or 801-266-7700 / FAX: 801-268-9992
ALS Environmental

For lab use only



ANALYTICAL REQUEST FORM

1. ☐ REGULAR Status
☐ RUSH Status Requested - ADDITIONAL CHARGE
 RESULTS REQUIRED BY _____ DATE _____

CONTACT ALS SALT LAKE PRIOR TO SENDING SAMPLES

2. Date 12/9/21 Purchase Order No. _____ 4. Quote No. _____

3. Company Name : AERO-ENVIRONMENTAL CONSULTING ALS Project Manager: Stella Hanis

Address: 1426 VIA ISOLA

5. Sample Collection

MONTEREY, CA 93940 Sampling Site: QUANTUM LABS, SAN JOSE, CA

Person to Contact: JORGE VIZCAINO Industrial Process: COBALTDECONTAMINATION

Telephone (831) 277-5831 Date of Collection: 12/14/2021

Fax Telephone () _____ Time Collected _____

E-mail Address: jorge@aero-enviro.com Date of Shipment: 12/14/2021

Billing Address (if different from above) Chain of Custody No.: _____

6. How did you first learn about ALS? _____

7. REQUEST FOR ANALYSES

Client Sample Number	Matrix*	Sample/Area Volume	ANALYSES REQUESTED - Use method number if known	Units**	Lab Comments
12-14-W11	Wipe	100cm ²	Co/alt / NIOSH 9102	ppm	Restroom Lobby 8
12-14-W12	"	"	Co/alt / " "	"	Lobby Reception
12-14-W13	"	"	" / " "	"	Restroom Lobby
12-14-W14	"	"	" / " "	"	Conference Room
12-14-FB	"	Field Blk	" / " "	"	Field Blk
12-14-MV1	Micro-Vac	100cm ²	" / NIOSH 7300	"	- Simon's office
		air			
		12-15-21			

* Specify: Solid sorbent tube, e.g. Charcoal; Filter type; Impinger solution; Bulk sample; Blood; Urine; Tissue; Soil; Water; Other

** 1. µg/sample 2. mg/m³ 3. ppm 4. % 5. µg/m³ 6. _____ (other) Please indicate one or more units in the column entitled Units**

Comments _____

Possible Contamination and/or Chemical Hazards _____

7. Chain of Custody (Optional)

Relinquished by	<u>[Signature]</u>	Date/Time	<u>12-14-21</u>
Received by	<u>[Signature]</u>	Date/Time	<u>12-15-21 11:00</u>
Relinquished by	_____	Date/Time	_____
Received by	_____	Date/Time	_____

960 West LeVoy Drive / Salt Lake City, UT 84123

800-356-9135 or 801-266-7700 / FAX: 801-268-9992

ALS Environmental



831.394.1199 E-Mail: Jorge@aero-enviro.com www.Aero-Enviro.com

APPENDIX B-PHOTOGRAPHIC DOCUMENTATION

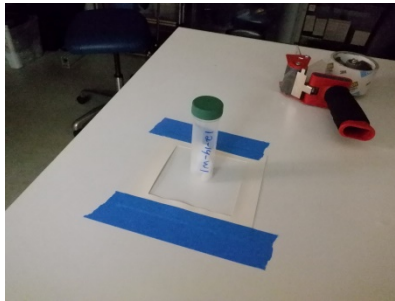


Photo 1-Clean Room Test Lab Bench



Photo 2-Clean Room Test Lab Floor

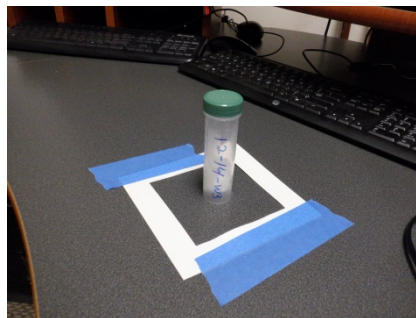


Photo 3-Simon's Office Desk sample



831.394.1199 E-Mail: Jorge@aero-enviro.com www.Aero-Enviro.com



Photo 4-Simon's Office Desk Sample

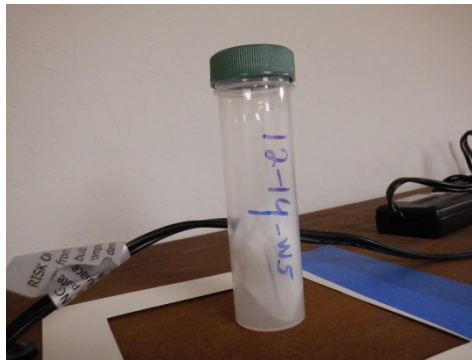


Photo 5-Simon's Office Bookshelf



Photo 6-Engineering Office Bookshelf



AERO-ENVIRONMENTAL
CONSULTING



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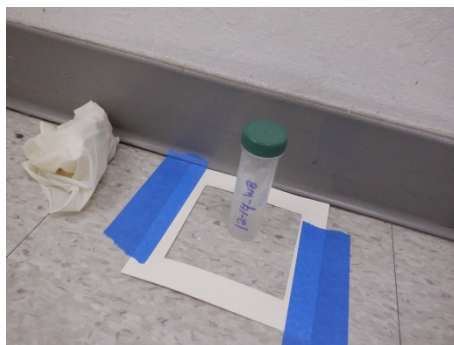


Photo 7-Break Room Floor

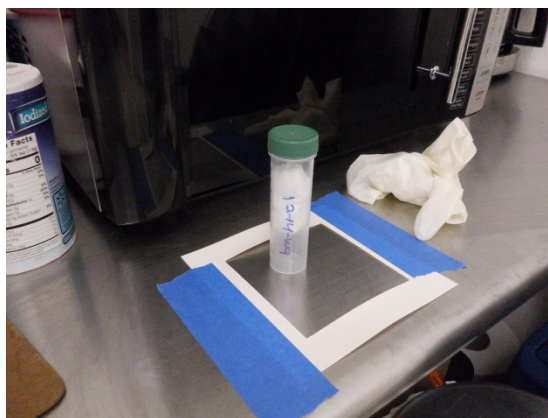


Photo 8-Break Room Microwave table



Photo 9-Restroom Floor



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Photo 10-Restroom Floor



Photo 11-Reception Area Desk

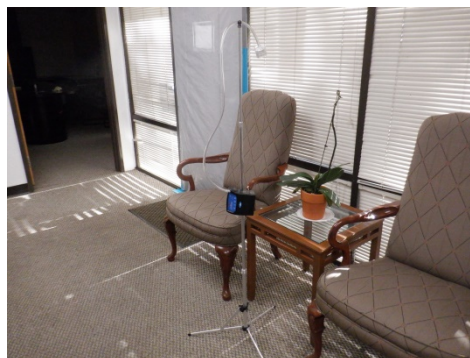


Photo 12-Air sample in reception area



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Photo 13-Wipe sample of restroom vanity



Photo 14-Air sample in Simon's Office



Photo 15-Air sample in Simon's office



831.394.1199 E-Mail: Jorge@aero-enviro.com www.Aero-Enviro.com



Photo 16-Wipe sample in Conference Room



Photo 17-Microvac sample of carpet



Photo 18-Microvac sample of carpet



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APPENDIX C-Professional Certifications

State of California
Division of Occupational Safety and Health
Certified Asbestos Consultant

Jorge Ignacio Vizcaino

Name



Certification No. 04-3554

Expires on 04/15/22

This certification was issued by the Division of Occupational Safety and Health as authorized by Sections 7160 et seq. of the Business and Professions Code.

The Board for Global EHS Credentialing (BGC)

through its vested authority, hereby confirms that

Jorge I. Vizcaino

has met all requirements of education, experience, and examination, and on-going maintenance set forth through the BGC's American Board of Industrial Hygiene®'s (ABIH®) credentialing division for re-certification in the Comprehensive Practice of Industrial Hygiene and is thereby conferred the credential of

Certified Industrial Hygienist® (CIH®)

The aforementioned individual is given all rights, privileges, and responsibilities as both a diplomate of the BGC and holder of the CIH credential, provided that the credential is not suspended or revoked, and it is renewed annually. Moreover, the holder must meet all recertification requirements, including the obligation to practice ethically as prescribed by the BGC.



Credential Number: 9814 CP

Award Date: October 4, 2010

Expiration Date: June 1, 2026

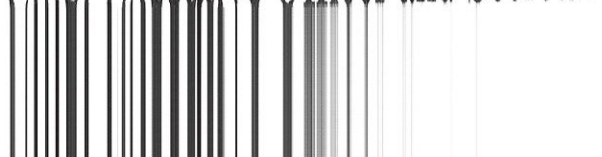
A handwritten signature in blue ink, reading "Cynthia Hanko", written over a horizontal line.

Cynthia Hanko, CIH
Chair of the Board of Directors



A handwritten signature in blue ink, reading "Ulric K. Chung", written over a horizontal line.

Ulric K. Chung, MCS, PhD
Chief Executive Officer and Secretary



From: recertinfo@ihmm.org
To: [Jorge Vizcaino](#)
Subject: Congratulations on Recertifying Your CHMM!
Date: Thursday, November 5, 2020 10:38:14 AM

Dear Vizcaino,

Congratulations on successfully recertifying your CHMM credential! Thank you for your continued effort in safety when working with hazardous materials. You are one of the many reasons why this world is a safer place to live. The amount of time you have taken to recertify has not gone unnoticed by the IHMM staff.

Your recertification application has been processed for the cycle ending 10/31/2021. Your new credential expiration date is 10/31/2026.

Please use this electronic copy of your **CHMM Letter of Compliance** as proof of credential and for any third-party verification needs until your presentation copies of your CHMM Letter of Compliance (proof of credential) and Certificate (suitable for display) arrive.

IHMM certifications are the standard of excellence in the hazardous materials industry. As an IHMM credential holder, you can:

- Validate your expertise in many areas
- Distinguish yourself in a competitive marketplace
- Increase your employment options
- Demonstrate ongoing competence
- Expand your professional network
- Benefit from public sector outreach
- Receive global recognition

You are now authorized to continue using your credential designation through the expiration date listed in your *MyIHMM* account online and on your certificate as long as you adhere to the CHMM Code of Ethics, remain in good standing, and maintain all required fees.

Remember to regularly access your *MyIHMM* account to monitor your certification and fee due dates, to maintain your record's accuracy and to keep abreast of certification news. As a Certificant you agree to the proper use of the logo and acronym designation, and to surrender the certificate in the event of withdrawal of certification by IHMM.

We appreciate your continued support of IHMM and your commitment to the professional excellence embodied in your credential.

Sincerely,



Gene Guilford
Executive Director



Institute of Hazardous Materials Management
9210 Corporate Blvd., Suite 470 | Rockville, MD 20850
(301) 984-8969 | (301) 984-1516 fax





STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC HEALTH



LEAD-RELATED CONSTRUCTION CERTIFICATE

INDIVIDUAL:



Jorge Vizcaino

CERTIFICATE TYPE:

Lead Inspector/Assessor

NUMBER:

LRC-00001930

EXPIRATION DATE:

11/3/2022

Disclaimer: This document alone should not be relied upon to confirm certification status. Compare the individual's photo and name to another valid form of government issued photo identification. Verify the individual's certification status by searching for Lead-Related Construction Professionals at www.cdph.ca.gov/programs/clppb or calling (800) 597-LEAD.





STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC HEALTH



LEAD-RELATED CONSTRUCTION CERTIFICATE

INDIVIDUAL:



David Kummer

CERTIFICATE TYPE:

Lead Sampling Technician

NUMBER:

LRC-00007343

EXPIRATION DATE:

10/27/2022

Disclaimer: This document alone should not be relied upon to confirm certification status. Compare the individual's photo and name to another valid form of government issued photo identification. Verify the individual's certification status by searching for Lead-Related Construction Professionals at www.cdph.ca.gov/programs/clppb or calling (800) 597-LEAD.



1426 Via Isola • Monterey, California 93940
831.394.1199 <https://www.Aero-Enviro.com>

December 17, 2021

QUANTUM LABS
2108 BERING DR. UNIT B
SAN JOSE, CA 95131

**RE: Bulk Sampling Results and Final Report for a Limited Asbestos Survey at
QUANTUM LABS-2108 Bering Drive, San Jose, CA 95131**

Simon Planck:

Aero-Environmental Consulting is pleased to present this initial suspect asbestos analysis investigation report for one this industrial building located at 2108 Bering Drive-Suite B, San Jose, California. Please find attached our project results, recommendations, and invoice.

PROJECT RESULTS

Aero-Environmental Consulting collected nine (9) bulk samples of construction/building materials in the office areas only of this building, which are considered suspect asbestos materials and which might be impacted by carpet removal. This survey was limited to only the carpeted areas of Suite B and did not include any other areas of the building.

The interior of these offices consisted of carpet over slab or floor tiles, and finished drywall with paint/texture.

Tabulated results are as follows (see Appendix A):



**TABLE 1-BULK SAMPLE RESULTS FOR SUSPECT ASBESTOS-CONTAINING MATERIALS**

Material Description	Material Location	T S I	Surf.	Misc	Regulated Asbestos Containing Material (RACM)	Cat. I Non-Friable	Cat. II Non-Friable	% Asbestos by PLM	Sample #
Wall Texture	Simon's Office			X				ND	12-14-01-1
Wall Texture	Conference Room			X				ND	12-14-01-2
Wall Texture	Lobby/ Reception			X				ND	12-14-01-3
Carpet Mastic	Simon's Office			X				ND	12-14-02-4
Carpet Mastic	Conference Room			X				ND	12-14-02-5
Basecove Mastic	Engineering Office			X				ND	12-14-03-6
Basecove Mastic	Lobby/ Reception			X				ND	12-14-03-7
12" Gray Floor Tiles/Mastic	Simon's Office			X				ND	12-14-04-8
12" Gray Floor Tiles/Mastic	Simon's Office			X				ND	12-14-04-9

CH = Chrysotile, ND = None Detected,

REGULATORY REQUIREMENTS

Asbestos-containing building materials contain asbestos in concentrations greater than one tenth of one percent (0.1%). Impacting materials containing greater than 0.1% asbestos either through repair, maintenance, renovation or demolition activities triggers numerous regulations enforced by such agencies as OSHA (worker protection) and EPA (environmental exposure, transportation and disposal). **No Asbestos-Containing Materials (ACM) were found during this assessment.**



Recommendations to Implement Regulatory Requirements

Aero-Environmental recommends that prior to renovation/demolition activities that will impact Asbestos-Containing Materials (ACM) identified in this report:

1. This survey was limited to the interior of this structure and did not include any exterior building materials or roof.
2. The purpose of the asbestos inspection was to respond to the Bay Area Air Quality Management District (BAAQMD) and Cal/OSHA requirement for a comprehensive survey to be conducted for ACM prior to any planned renovation/demolition in accordance with the United States Environmental Protection Agency (USEPA) National Emission Standard for Hazardous Air Pollutants (NESHAP) regulation (Title 40 Code of Federal Regulations [CFR] Part 61 Subpart M).

Health and Safety Code 25914

3. This regulation requires that a separate contract be generated if asbestos-related work or hazardous substance removal is required to be performed if these materials were not revealed in the original contract documents. It also requires a contractor to immediately stop work if a hazardous substance/material is discovered that was not noted in the original contract documents and inform the owner in writing.

Aero-Environmental provided these services consistent with the level and skill ordinarily exercised by members of the profession currently practicing under similar conditions.

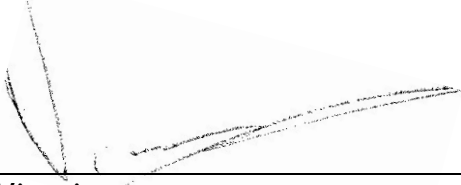
This statement is in lieu of other statements either expressed or implied. The intent of the report is to aid the building owner, architect, construction manager, general contractors, and potential demolition and abatement contractors in locating asbestos. This report is not intended to serve as a bidding document nor as a project specification document and actual site conditions and quantities should be field verified. The scope of services performed in execution of this evaluation may not be appropriate to satisfy the needs of other users, and use or re-use of this document, the findings, conclusions, or recommendations is at the risk of said user. Although every attempt has been made to identify suspect asbestos in the areas identified, the inspection techniques used are inherently limited in the sense that only full demolition procedures will reveal all building materials of a structure and therefore all areas of potential asbestos.

Additionally, the passage of time may result in a change in the environmental characteristics at this site. This report does not warrant against future operations or conditions that could affect the recommendations made. The results, findings, conclusions and recommendations expressed in this report are based only on conditions that were observed during Aero-Environmental Consulting's inspection of the site.

Thank you for this opportunity to be of service to you. If you have any questions, please call us at 831.394.1199.



This report prepared by:



Jorge Vizcaino
Certified Asbestos Consultant 04-3554
CDPH Lead Inspector/Assessor No. 15393
Certified Industrial Hygienist No. 9814



APPENDIX A

Asbestos Analysis Results

**LA Testing**

5431 Industrial Drive Huntington Beach, CA 92649

Tel/Fax: (714) 828-4999 / (714) 828-4944

<http://www.LATesting.com> / gardengrovelab@latesting.com

LA Testing Order: 332130544

Customer ID: 32AECO77

Customer PO:

Project ID:

Attention: Jorge Vizcaino
Aero-Environmental Consulting, Inc.
1426 Via Isola
Monterey, CA 93940

Phone: (831) 394-1199

Fax:

Received Date: 12/16/2021 1:10 PM

Analysis Date: 12/17/2021

Collected Date: 12/14/2021

Project: Quantum Labs

**Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized
Light Microscopy**

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
12-14-01-1-Texture 332130544-0001	Wall texture- Simons office	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
12-14-01-1-Drywall 332130544-0001A	Wall texture- Simons office	Brown/Beige Fibrous Heterogeneous	10% Cellulose <1% Glass	90% Non-fibrous (Other)	None Detected
12-14-01-2-Texture 332130544-0002	Wall texture- Conference	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
12-14-01-2-Drywall 332130544-0002A	Wall texture- Conference	Brown/White Fibrous Heterogeneous	12% Cellulose <1% Glass	88% Non-fibrous (Other)	None Detected
12-14-01-3-Texture 332130544-0003	Wall texture- Lobby/ Reception	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
12-14-01-3-Drywall 332130544-0003A	Wall texture- Lobby/ Reception	Brown/White Fibrous Heterogeneous	12% Cellulose <1% Glass	88% Non-fibrous (Other)	None Detected
12-14-02-4-Carpet 332130544-0004	Carpet mastic- Simons office	White/Red/Various Fibrous Homogeneous	90% Synthetic	10% Non-fibrous (Other)	None Detected
12-14-02-4-Mastic 332130544-0004A	Carpet mastic- Simons office	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
12-14-02-5-Carpet 332130544-0005	Carpet mastic- conference room	White/Red/Various Fibrous Homogeneous	90% Synthetic	10% Non-fibrous (Other)	None Detected
12-14-02-5-Mastic 332130544-0005A	Carpet mastic- conference room	Black/Yellow Non-Fibrous Heterogeneous		100% Non-fibrous (Other)	None Detected
12-14-04-8-Vinyl Floor Tile 332130544-0006	12" Gray RFT/ mastic simons office	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
12-14-04-8-Mastic 332130544-0006A	12" Gray RFT/ mastic simons office	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
12-14-04-9-Vinyl Floor Tile 332130544-0007	12" Gray RFT/ mastic simons office	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
12-14-04-9-Mastic 332130544-0007A	12" Gray RFT/ mastic simons office	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
12-14-03-6-Cove Base 332130544-0008	Basecove mastic- Engineering office	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

Initial report from: 12/17/2021 12:37:22

**LA Testing**

5431 Industrial Drive Huntington Beach, CA 92649

Tel/Fax: (714) 828-4999 / (714) 828-4944

<http://www.LATesting.com> / gardengrovelab@lateesting.com

LA Testing Order: 332130544

Customer ID: 32AECO77

Customer PO:

Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
12-14-03-6-Mastic 332130544-0008A	Basecove mastic- Engineering office	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
12-14-03-7-Cove Base 332130544-0009	Basecove mastic- Lobby	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
12-14-03-7-Mastic 332130544-0009A	Basecove mastic- Lobby	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

Analyst(s)

Brittany Quiring (18)

Michael Chapman, Laboratory Manager
or Other Approved Signatory

LA Testing maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by LA Testing. LA Testing bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 "Interim Method") but augmented with procedures outlined in the 1993 ("final") version of the method. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore LA Testing recommends gravimetric reduction prior to analysis. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Estimation of uncertainty is available on request.

Samples analyzed by LA Testing Huntington Beach, CA NVLAP Lab Code 101384-0, CA ELAP 1406

Initial report from: 12/17/2021 12:37:22



EMSL ANALYTICAL, INC.
LABORATORY PRODUCTS TRAINING

Asbestos Chain of Custody For California

EMSL Order Number (lab use only):

#332130544

San Leandro, CA 94577

PHONE: (510) 895-3675

FAX: (510) 895-3680

Company Name : Aero-Environmental Consulting, Inc.		EMSL Customer ID:	
Street: 1426 Via Isola		City: Monterey	State or Province: CA
Zip/Postal Code: 93940	Country: US	Telephone #: 831.277.5831	Fax #:
Report To (Name): Jorge Vizcaino		Please Provide Results via: <input type="checkbox"/> Fax <input type="checkbox"/> Email	
email Address: Jorge@Aero-Enviro.com		Purchase Order Number:	
Client Project ID: <u>Quantum Labs</u>		EMSL Project ID (internal use only):	
State or Province Collected: CA			
EMSL Bill-to: <input type="checkbox"/> Same <input type="checkbox"/> Different: If Bill-to is different, note instructions in comments below. Third-party billing requires written authorization.			
Turnaround Time (TAT) Options Please Check			
<input type="checkbox"/> 3 Hr ¹	<input type="checkbox"/> 4-4.5Hr ¹ <small>AHERA Only</small>	<input type="checkbox"/> 6 Hr ¹	<input checked="" type="checkbox"/> 24 Hr <input type="checkbox"/> 32 Hr ² <input type="checkbox"/> 48 Hr <input type="checkbox"/> 72 Hr <input type="checkbox"/> 96 Hr <input type="checkbox"/> 1 Week <input type="checkbox"/> 2 Week
<small>¹Premium Service Charge applies for 3 Hour TEM AHERA or EPA Level II TAT - you will be asked to sign an authorization form. TEM Air 3-6 Hour, please call ahead to schedule ²32 Hour TAT available for select tests only; samples must be submitted by 11:30am.</small>			
PCM - Air <input type="checkbox"/> NIOSH 7400 <input type="checkbox"/> w/ OSHA 8hr. TWA PLM - Bulk (Reporting Limit) <input checked="" type="checkbox"/> PLM EPA 600/R-93/116 (<1%) <input type="checkbox"/> PLM EPA NOB (<1%) <input type="checkbox"/> 400 Point Count (<0.25%) <input type="checkbox"/> 400 Point Count with Gravimetric Reduction (<0.25%) <input type="checkbox"/> 1000 Point Count (<0.1%) <input type="checkbox"/> 1000 Point Count with Gravimetric Reduction (<0.1%) <input type="checkbox"/> NIOSH 9002 (<1%) TEM - Water: EPA 100.2 Fibers >10µm <input type="checkbox"/> Waste <input type="checkbox"/> Drinking All Fiber Sizes <input type="checkbox"/> Waste <input type="checkbox"/> Drinking		TEM - Air <input type="checkbox"/> AHERA 40 CFR, Part 763 <input type="checkbox"/> CARB Modified AHERA <input type="checkbox"/> EPA Level II <input type="checkbox"/> NIOSH 7402 <input type="checkbox"/> ISO 10312 TEM - Bulk <input type="checkbox"/> TEM EPA NOB <input type="checkbox"/> TEM EPA 600/R-93/116 with Milling Prep (<0.1%)* Soil/Rock/Vermiculite (Reporting Limit) <input type="checkbox"/> PLM CARB 435 - A (<0.25%)* <input type="checkbox"/> TEM CARB 435 - B (<0.1%) <input type="checkbox"/> TEM CARB 435 - C (<0.01%)* <input type="checkbox"/> TEM Qualitative via Filtration Prep <input type="checkbox"/> TEM Qualitative via Drop Mount Prep <input type="checkbox"/> PLM EPA 600/R-93/116 with Milling Prep (<0.25%) <input type="checkbox"/> PLM EPA 600/R-93/116 with Milling Prep (<0.1%) <input type="checkbox"/> TEM EPA 600/R-93/116 with Milling Prep (<0.1%)* * Lower reporting limits available upon request	
		TEM- Dust	Other test (please specify)
		<input type="checkbox"/> Microvac - ASTM D 5755 <input type="checkbox"/> Wipe - ASTM D6480 <input type="checkbox"/> Carpet Sonication (EPA 600/J-93/167)	
<input checked="" type="checkbox"/> Stop At First Positive (clearly identify homogenous areas below)		Filter Pore Size (Air Samples): <input type="checkbox"/> 0.8µm <input checked="" type="checkbox"/> 0.45µm	
Sampler's Name: <u>Jorge Vizcaino</u>		Sampler's Signature: <u>[Signature]</u>	
Sample #	Sample Description/ Location	Volume, Area, or Homogenous Area	Date and Time Sampled
12-14-01-1	Wall Texture - Simon's Office	First positive	12-14-21
12-14-01-2	" " - Conference Room		12-14-21
12-14-01-3	" " - Lobby/Reception		12-14-21
12-14-02-4	Carpet Marker - Simon's Office		12-14-21
Client Sample # (s):		Total # of Samples: 9	
Relinquished by (Client): <u>[Signature]</u>		Date: 12-15-21	Time:
Received by (Lab): <u>JS(EMSL-FX)</u>		Date: 12/16/21	Time: 1:10pm
Comments/Special Instructions:			



APPENDIX B Photographic Documentation

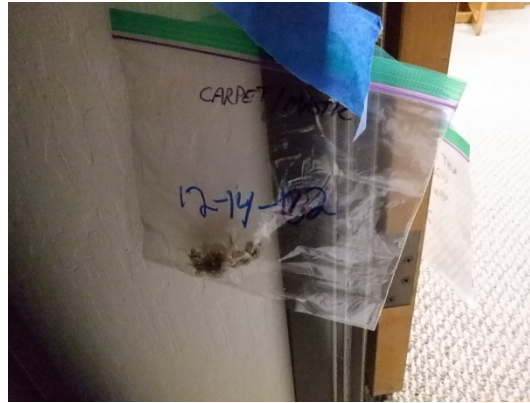


Photo 1-Carpet Mastic sample

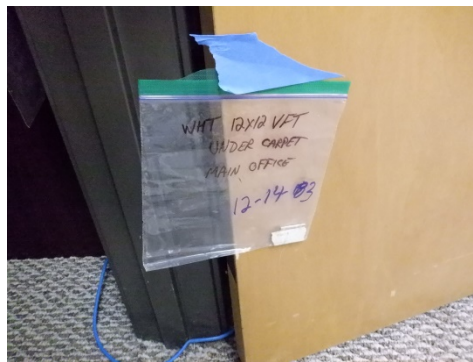


Photo 2-Floor Tile Sample



Photo 3-Mastic under carpet

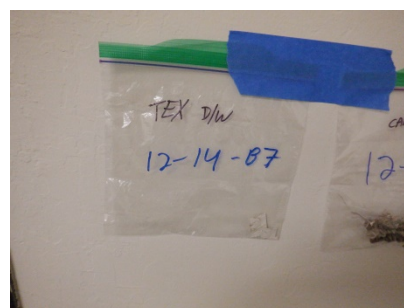


Photo 4-Textured Drywall sample



APPENDIX C

Professional Certifications



831.394.1199 E-Mail: Jorge@aero-enviro.com www.Aero-Enviro.com

Surface Wipe Sample Evaluation of Cobalt 59 Dust following interior Cobalt cleanup operations inside Lab M at Quantum Labs, San Jose, California

Date Inspection Conducted:	12/16/2021
Date of Report:	12/23/2021
Assignment:	Surface Wipe Sample Evaluation following Cobalt 59 Decontamination activities for Lab M, Quantum Labs
Address of Evaluation	QUANTUM LABS- 2108 Bering Dr., Suite B, San Jose, CA
Work Performed By:	Jorge Vizcaino, CIH 9814
Aero-Environmental Project Name:	QUANTUM LABS-Cobalt Decontamination Monitoring

QUANTUM LABS
2108 BERING DR. UNIT B
SAN JOSE, CA 95131

Highlights of this Surface Wipe Sample Evaluation following Cobalt 59 Decontamination activities for Lab M

On December 16th, 2021, Aero-Environmental Industrial Hygiene Technician David Kummer (LRC-00007343) conducted a Surface Wipe Sample Evaluation following Cobalt 59 Decontamination activities for Lab M at Quantum Labs.

What Aero-Environmental Did

- We collected 22 clearance wipe samples and 2 field blanks of Lab M containment area and the corridor between Lab M and Lab Q following decontamination of this area.
- We communicated with the Belfor Environmental project manager any issues of concern.

What We Found

- Analytical results for the clearance wipe samples indicated detectable cobalt surface concentrations in all of the samples collected, with ten (10) wipe samples exceeding the BNL "Free Release" Clearance Level of 2 µg/100 cm².



831.394.1199 E-Mail: Jorge@aero-enviro.com www.Aero-Enviro.com

- The BNL “Free Release” level of 2 ug/100 cm² is the maximum level allowed on accessible surfaces for this project.
- Surface wipe samples 12-16-W3, 12-16-W7, 12-16-W8, 12-16-W9, 12-16-W10, 12-16-W11, 12-16-W12, 12-16-W13, 12-16-W14, and 12-16-W23 exceeded the “Free Release” level of 2 ug/100 cm². These sample locations are referenced in Figure 1-Sample Location Plan.

What Aero-Environmental recommends

- Based on these analytical results the entire Lab M and the corridor between Lab M and Lab Q should be decontaminated by Belfor Environmental. Particular decontamination efforts should be directed to the enclosed “Temescal” area which is where most of the elevated surface wipe sample concentrations were detected.
- It is recommended that all acoustical ceiling tiles be sampled for asbestos in this area and removed and discarded.
- It is recommended that the entire HVAC system in this area and throughout the building be professionally cleaned and decontaminated.
- It is recommended that all of the equipment in the Temescal area of Lab M be removed and decontaminated prior to conducting another surface wipe clearance.

Abbreviations

cm ²	Square centimeter
µg/100 cm ²	Micrograms per 100 square centimeters
mg/m ³	Milligrams per cubic meter
ABIH®	American Board of Industrial Hygienists
ACGIH®	American Conference of Governmental Industrial Hygienists
BNL	Brookhaven National Lab
CAL-OSHA	California Occupational Safety and Health Administration
CIH	Certified Industrial Hygienist
CFR	Code of Federal Regulations
CCR	California Code of Regulations
HEPA	High Efficiency Particulate Air
NIOSH	National Institute of Occupational Safety and Health
PPE	Personal Protective Equipment
OEL	Occupational Exposure Level
PBZ	Personal Breathing Zone



831.394.1199 E-Mail: Jorge@aero-enviro.com www.Aero-Enviro.com

ppb	Parts per billion
ppm	Parts per million
PEL	Permissible exposure limit
PPE	Personal Protective Equipment
TWA	Time-weighted average

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Summary

On December 16th, 2021, Aero-Environmental Industrial Hygiene Technician David Kummer (LRC-00007343) conducted a Surface Wipe Sample Evaluation following Cobalt 59 Decontamination activities for Lab M at Quantum Labs. Following an opening safety meeting and walkthrough of the decontamination areas, the industrial hygiene professionals evaluated the cobalt decontamination containment system for Lab M that Belfor Environmental indicated was ready for surface wipe sample clearance testing. Surface wipe sampling of this area was conducted by selecting specific floor and elevated horizontal surfaces, where cobalt dust could have potentially accumulated. The cobalt decontamination containment was also evaluated and found to be satisfactory. In



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addition, cobalt decontamination activities and work practices were discussed with the project lead supervisor, Greg Henke.

Twenty-two (22) clearance wipe samples and two (2) field blanks were collected of Lab M containment area and the corridor between Lab M and Lab Q following decontamination of this area. The location of these surface wipe samples included the entire flooring, hood covers, horizontal surfaces like tables, Temescal area, Evaporator Area, and Fume Hood areas.

Surface wipe samples 12-16-W3, 12-16-W7, 12-16-W8, 12-16-W9, 12-16-W10, 12-16-W11, 12-16-W12, 12-16-W13, 12-16-W14, and 12-16-W23 exceeded the "Free Release" level of 2 ug/100 cm². These sample locations are referenced in Figure 1-Sample Location Plan.

Introduction

On December 16th, 2021, Aero-Environmental Industrial Hygiene Technician David Kummer (LRC-00007343) conducted a Surface Wipe Sample Evaluation following Cobalt 59 Decontamination activities for Lab M at Quantum Labs. Following an opening safety meeting and walkthrough of the decontamination areas, the industrial hygiene professionals evaluated the cobalt decontamination containment system for Lab M that Belfor Environmental indicated was ready for surface wipe sample clearance testing. Surface wipe sampling of this area was conducted by selecting specific floor and elevated horizontal surfaces, where cobalt dust could have potentially accumulated. The cobalt decontamination containment was also evaluated and found to be satisfactory. In addition, cobalt decontamination activities and work practices were discussed with the project lead supervisor, Greg Henke.

Methods

Belfor Environmental Scope of Work consists of the following:

- Set up critical barriers and containments to isolate work areas.
- Lab pack of loose chemicals.
- Removal of Select Exhaust Systems
- Removal of specified tools owned by Maxim.



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- Removal of specified pipe runs
- Decontamination of Quantum tools
- Clean Facility of Cobalt 59 contamination.

Aero-Environmental Consulting conducted the following activities:

- 1) Collection of clearance wipe samples in Lab M.

TABLE 1-AIR/SURFACE SAMPLING METHODS		
Substance	Reason for Sampling	Sampling Methods
Surface Cobalt Dust	Possible Exposure during cobalt decontamination activities	NIOSH Method 9102

Evaluation Criteria

The primary source and industry-wide reference for surface wipe sampling and “clearance” criteria for surface contamination is the Brookhaven Nation Lab (BNL) document IH 75190-Surface Wipe Sampling for Metals. This document describes a field procedure for taking wipe samples for metals on surfaces. It is based on methodology described in NIOSH 9100 “Lead in Surface Wipe Samples” of the NIOSH Manual of Analytical Methods. The goal of the procedure is to provide a uniform methodology to collect representative samples. Using this method will ensure repeatability between various sampling personnel and between surface configurations. It is used for characterizing surface levels for the following reasons:

- Decommissioning operational areas
- Evaluating the effectiveness of clean-up of a spill
- Evaluating compliance with housekeeping or “free” public release levels in operational areas
- Characterizing a piece of equipment for release.



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Results

Analytical results for the clearance wipe samples indicated detectable cobalt surface concentrations in all of the samples collected, with ten (10) wipe samples exceeding the BNL "Free Release" Clearance Level of $2 \mu\text{g}/100 \text{ cm}^2$.

Surface wipe samples 12-16-W3, 12-16-W7, 12-16-W8, 12-16-W9, 12-16-W10, 12-16-W11, 12-16-W12, 12-16-W13, 12-16-W14, and 12-16-W23 exceeded the "Free Release" level of $2 \mu\text{g}/100 \text{ cm}^2$. These sample locations are referenced in Figure 1- Sample Location Plan.

TABLE 2- Surface Wipe Sample Results-Lab M and Temescal Area

Sample #/Date	Personal/Area	Concentration
12-16-W1-Dec 16	Floor-North Side Containment Area	$0.84 \mu\text{g}/100\text{cm}^2$
12-16-W2-Dec 16	Floor-North Side Containment Area	$1.1 \mu\text{g}/100\text{cm}^2$
12-16-W3-Dec 16	Floor-North Side Containment Area	$2.8 \mu\text{g}/100\text{cm}^2$
12-16-W4-Dec 16	Hood Roof- North Side Containment Area	$0.12 \mu\text{g}/100\text{cm}^2$
12-16-W5-Dec 16	Hood Roof- North Side Containment Area	$0.40 \mu\text{g}/100\text{cm}^2$
12-16-W6-Dec 16	Hood Roof- North Side Containment Area	$0.14 \mu\text{g}/100\text{cm}^2$
12-16-W7-Dec 16	Table-Horizontal Surface-Temescal Area	$11 \mu\text{g}/100\text{cm}^2$
12-16-W8-Dec 16	Floor-Restricted Temescal Area	$11 \mu\text{g}/100\text{cm}^2$
12-16-W9-Dec 16	Floor-Restricted Temescal Area	$3.7 \mu\text{g}/100\text{cm}^2$
12-16-W10-Dec 16	Floor-Restricted Temescal Area	$8.3 \mu\text{g}/100\text{cm}^2$
12-16-W11-Dec 16	Floor-Restricted	$55 \mu\text{g}/100\text{cm}^2$



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	Temescal Area	
12-16-W12-Dec 16	Floor- South Side Containment Area	16 $\mu\text{g}/100\text{cm}^2$
12-16-W13-Dec 16	Floor-South Side Containment Area	8.3 $\mu\text{g}/100\text{cm}^2$
12-16-W14-Dec 16	Floor-South Side Containment Area	26 $\mu\text{g}/100\text{cm}^2$
12-16-W15-Dec 16	Floor-South Side Containment Area	0.18 $\mu\text{g}/100\text{cm}^2$
12-16-W16-Dec 16	Top of Hood-South Side Containment Area	0.21 $\mu\text{g}/100\text{cm}^2$
12-16-W17-Dec 16	Top of Hood-South Side Containment Area	2.0 $\mu\text{g}/100\text{cm}^2$
12-16-W18-Dec 16	Top of Hood-South Side Containment Area	1.0 $\mu\text{g}/100\text{cm}^2$
12-16-W19-Dec 16	Field Blank	<0.075 $\mu\text{g}/100\text{cm}^2$
12-16-W20-Dec 16	Field Blank	<0.075 $\mu\text{g}/100\text{cm}^2$
12-16-W21-Dec 16	Floor-Corridor between Lab Q and Lab M	0.40 $\mu\text{g}/100\text{cm}^2$
12-16-W22-Dec 16	Floor-Corridor between Lab Q and Lab M	1.2 $\mu\text{g}/100\text{cm}^2$
12-16-W23-Dec 16	Floor-Corridor between Lab Q and Lab M	3.3 $\mu\text{g}/100\text{cm}^2$
12-16-W24-Dec 16	Floor-Corridor between Lab Q and Lab M	0.51 $\mu\text{g}/100\text{cm}^2$

Conclusions and Recommendations

- This dust evaluation did indicate cobalt dust contamination inside the entire Lab M, with surface contamination levels extremely elevated inside this area in



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particular very elevated concentrations in the Temescal area. Based on these analytical results the entire Lab M and the corridor between Lab M and Lab Q should be completely decontaminated prior to re-testing.

- It is recommended that all acoustical ceiling tiles be sampled for asbestos in this area and removed and discarded.
- It is recommended that the entire HVAC system in this area and throughout the building be professionally cleaned and decontaminated.
- It is recommended that all of the equipment in the Temescal area of Lab M be removed and decontaminated prior to conducting another surface wipe clearance.

This report serves as a surface wipe sampling assessment report for this decontamination project at Quantum Labs.

Availability of Report/Disclaimer

The recommendations in this report are made on the basis of the findings at the workplace evaluated and may not be applicable to other workplaces. This report was prepared by Jorge Vizcaino, CIH/CHMM with Aero-Environmental Consulting, INC. Analytical support was provided by AIHA Accredited Laboratory ALS Environmental in Salt Lake City, Utah.

Sincerely,
Aero-Environmental Consulting, INC

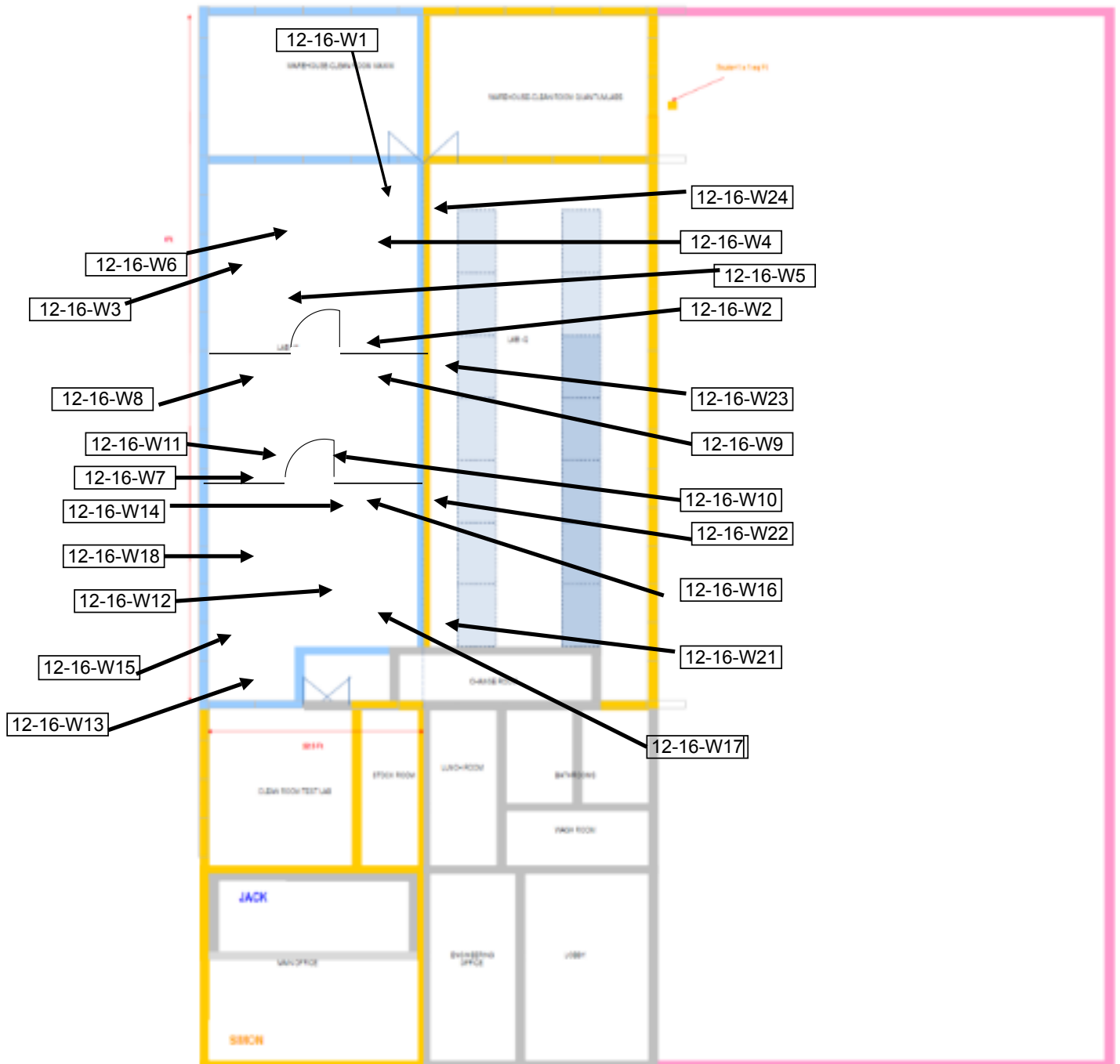
Jorge Vizcaino
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FIGURE 1 -FLOOR PLAN WITH WIPE SAMPLING LOCATIONS





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APPENDIX A-ANALYTICAL RESULTS



ANALYTICAL REPORT

Report Date: December 22, 2021

Jorge Vizcaino
Aero-Environmental Consulting
1426 Via Isola
Monterey, CA 93940

Phone: (831) 277-5831

E-mail: jorge@aero-enviro.com

Workorder: **34-2135152**

Client Project ID: Quantum Labs, San Jose, CA
Purchase Order: NA
Project Manager: Stella Hanis

Analytical Results

Sample ID: 12-16-W1		Collected: 12/16/2021
Lab ID: 2135152001		Received: 12/17/2021
Sampling Location: Floor		
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP13
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/20/2021 (288613) Analyzed: 12/22/2021 (288747)
Analyte	Result (ug/sample)	RL (ug/sample)
Cobalt	0.84	0.075

Sample ID: 12-16-W2		Collected: 12/16/2021
Lab ID: 2135152002		Received: 12/17/2021
Sampling Location: Floor		
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP13
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/20/2021 (288613) Analyzed: 12/22/2021 (288747)
Analyte	Result (ug/sample)	RL (ug/sample)
Cobalt	1.1	0.075

Sample ID: 12-16-W3		Collected: 12/16/2021
Lab ID: 2135152003		Received: 12/17/2021
Sampling Location: Floor		
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP13
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/20/2021 (288613) Analyzed: 12/22/2021 (288747)
Analyte	Result (ug/sample)	RL (ug/sample)
Cobalt	2.8	0.075



ANALYTICAL REPORT

Workorder: **34-2135152**

Client Project ID: Quantum Labs, San Jose, CA

Purchase Order: NA

Project Manager: Stella Hanis

Analytical Results

Sample ID: 12-16-W4		Collected: 12/16/2021
Lab ID: 2135152004		Received: 12/17/2021
Sampling Location: Hood Roof		
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP13
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/20/2021 (288613) Analyzed: 12/22/2021 (288747)
Analyte	Result (ug/sample)	RL (ug/sample)
Cobalt	0.12	0.075

Sample ID: 12-16-W5		Collected: 12/16/2021
Lab ID: 2135152005		Received: 12/17/2021
Sampling Location: Hood Roof		
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP13
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/20/2021 (288613) Analyzed: 12/22/2021 (288747)
Analyte	Result (ug/sample)	RL (ug/sample)
Cobalt	0.40	0.075

Sample ID: 12-16-W6		Collected: 12/16/2021
Lab ID: 2135152006		Received: 12/17/2021
Sampling Location: Hood Roof		
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP13
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/20/2021 (288613) Analyzed: 12/22/2021 (288747)
Analyte	Result (ug/sample)	RL (ug/sample)
Cobalt	0.14	0.075

Sample ID: 12-16-W7		Collected: 12/16/2021
Lab ID: 2135152007		Received: 12/17/2021
Sampling Location: On Top of Table		
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP13
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/20/2021 (288613) Analyzed: 12/22/2021 (288747)
Analyte	Result (ug/sample)	RL (ug/sample)
Cobalt	11	0.075



ANALYTICAL REPORT

Workorder: **34-2135152**

Client Project ID: Quantum Labs, San Jose, CA
Purchase Order: NA
Project Manager: Stella Hanis

Analytical Results

Sample ID: 12-16-W8		Collected: 12/16/2021
Lab ID: 2135152008		Received: 12/17/2021
Sampling Location: Floor		
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP13
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/20/2021 (288613) Analyzed: 12/22/2021 (288747)
Analyte	Result (ug/sample)	RL (ug/sample)
Cobalt	11	0.075

Sample ID: 12-16-W9		Collected: 12/16/2021
Lab ID: 2135152009		Received: 12/17/2021
Sampling Location: Floor		
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP13
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/20/2021 (288613) Analyzed: 12/22/2021 (288747)
Analyte	Result (ug/sample)	RL (ug/sample)
Cobalt	3.7	0.075

Sample ID: 12-16-W10		Collected: 12/16/2021
Lab ID: 2135152010		Received: 12/17/2021
Sampling Location: Floor		
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP13
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/20/2021 (288613) Analyzed: 12/22/2021 (288747)
Analyte	Result (ug/sample)	RL (ug/sample)
Cobalt	8.3	0.075

Sample ID: 12-16-W11		Collected: 12/16/2021
Lab ID: 2135152011		Received: 12/17/2021
Sampling Location: Floor Temescal Room		
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP13
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/20/2021 (288613) Analyzed: 12/22/2021 (288747)
Analyte	Result (ug/sample)	RL (ug/sample)
Cobalt	55	0.075



ANALYTICAL REPORT

Workorder: **34-2135152**

Client Project ID: Quantum Labs, San Jose, CA

Purchase Order: NA

Project Manager: Stella Hanis

Analytical Results

Sample ID: 12-16-W12		Collected: 12/16/2021
Lab ID: 2135152012		Received: 12/17/2021
Sampling Location: Floor		
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP13
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/20/2021 (288613) Analyzed: 12/22/2021 (288747)
Analyte	Result (ug/sample)	RL (ug/sample)
Cobalt	16	0.075

Sample ID: 12-16-W13		Collected: 12/16/2021
Lab ID: 2135152013		Received: 12/17/2021
Sampling Location: Floor		
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP13
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/20/2021 (288613) Analyzed: 12/22/2021 (288747)
Analyte	Result (ug/sample)	RL (ug/sample)
Cobalt	8.3	0.075

Sample ID: 12-16-W14		Collected: 12/16/2021
Lab ID: 2135152014		Received: 12/17/2021
Sampling Location: Floor		
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP13
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/20/2021 (288613) Analyzed: 12/22/2021 (288747)
Analyte	Result (ug/sample)	RL (ug/sample)
Cobalt	26	0.075

Sample ID: 12-16-W15		Collected: 12/16/2021
Lab ID: 2135152015		Received: 12/17/2021
Sampling Location: On Top of Table		
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP13
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/20/2021 (288613) Analyzed: 12/22/2021 (288747)
Analyte	Result (ug/sample)	RL (ug/sample)
Cobalt	0.18	0.075



ANALYTICAL REPORT

Workorder: **34-2135152**

Client Project ID: Quantum Labs, San Jose, CA

Purchase Order: NA

Project Manager: Stella Hanis

Analytical Results

Sample ID: 12-16-W16		Collected: 12/16/2021
Lab ID: 2135152016		Received: 12/17/2021
Sampling Location: Top of Hood		
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP13
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/20/2021 (288613) Analyzed: 12/22/2021 (288747)
Analyte	Result (ug/sample)	RL (ug/sample)
Cobalt	0.21	0.075

Sample ID: 12-16-W17		Collected: 12/16/2021
Lab ID: 2135152017		Received: 12/17/2021
Sampling Location: Top of Hood		
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP13
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/20/2021 (288613) Analyzed: 12/22/2021 (288747)
Analyte	Result (ug/sample)	RL (ug/sample)
Cobalt	2.0	0.075

Sample ID: 12-16-W18		Collected: 12/16/2021
Lab ID: 2135152018		Received: 12/17/2021
Sampling Location: Top of Hood		
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP13
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/20/2021 (288613) Analyzed: 12/22/2021 (288747)
Analyte	Result (ug/sample)	RL (ug/sample)
Cobalt	1.0	0.075

Sample ID: 12-16-W19		Collected: 12/16/2021
Lab ID: 2135152019		Received: 12/17/2021
Sampling Location: Field Blank		
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP13
Dilution: 1	Sampling Parameter: Area Not Applicable	Prepared: 12/20/2021 (288613) Analyzed: 12/22/2021 (288747)
Analyte	Result (ug/sample)	RL (ug/sample)
Cobalt	<0.075	0.075



ANALYTICAL REPORT

Workorder: **34-2135152**

Client Project ID: Quantum Labs, San Jose, CA
Purchase Order: NA
Project Manager: Stella Hanis

Analytical Results

Sample ID: 12-16-W20		Collected: 12/16/2021
Lab ID: 2135152020		Received: 12/17/2021
Sampling Location: Field Blank		
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP13
Dilution: 1	Sampling Parameter: Area Not Applicable	Prepared: 12/20/2021 (288613) Analyzed: 12/22/2021 (288747)
Analyte	Result (ug/sample)	RL (ug/sample)
Cobalt	<0.075	0.075

Sample ID: 12-16-W21		Collected: 12/16/2021
Lab ID: 2135152021		Received: 12/17/2021
Sampling Location: Floor		
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP13
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/20/2021 (288613) Analyzed: 12/22/2021 (288747)
Analyte	Result (ug/sample)	RL (ug/sample)
Cobalt	0.40	0.075

Sample ID: 12-16-W22		Collected: 12/16/2021
Lab ID: 2135152022		Received: 12/17/2021
Sampling Location: Floor		
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP13
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/20/2021 (288613) Analyzed: 12/22/2021 (288747)
Analyte	Result (ug/sample)	RL (ug/sample)
Cobalt	1.2	0.075

Sample ID: 12-16-W23		Collected: 12/16/2021
Lab ID: 2135152023		Received: 12/17/2021
Sampling Location: Floor		
Method: NIOSH 9102 Mod, Ghost Wipe	Media: Ghost Wipe	Instrument: ICP13
Dilution: 1	Sampling Parameter: Area 100 cm ²	Prepared: 12/20/2021 (288613) Analyzed: 12/22/2021 (288747)
Analyte	Result (ug/sample)	RL (ug/sample)
Cobalt	3.3	0.075



ANALYTICAL REPORT

Workorder: **34-2135152**

Client Project ID: Quantum Labs, San Jose, CA
Purchase Order: NA
Project Manager: Stella Hanis

Analytical Results

Sample ID: 12-16-W24		Collected: 12/16/2021	
Lab ID: 2135152024		Received: 12/17/2021	
Sampling Location: Floor			
Method: NIOSH 9102 Mod, Ghost Wipe		Instrument: ICP13	
Media: Ghost Wipe			
Dilution: 1		Prepared: 12/20/2021 (288613)	
Sampling Parameter: Area 100 cm ²		Analyzed: 12/22/2021 (288747)	
Analyte	Result (ug/sample)	RL (ug/sample)	
Cobalt	0.51	0.075	

Comments

Quality Control: - (Batch: 288613)

Ghost wipe LMB 769230 was above the reporting limit for phosphorus, thallium and zinc, so the LCS 769231, LCSD 769232, and RLVS 769233 results have been media blank corrected for phosphorus, thallium and zinc with LMB 769230.

Ghost wipe LMB 769236 was above the reporting limit for phosphorus, thallium and zinc, so the LCS 769237, LCSD 769238, and RLVS 769239 results have been media blank corrected for phosphorus, thallium and zinc with LMB 769236.

The cobalt and chromium recoveries for LCSD 769238 are low outside current LCS limits. NC/CAR-2153 was initiated to document the incident.

Report Authorization (/S/ is an electronic signature that complies with 21 CFR Part 11)

Method (Analysis Batch)	Analyst	Peer Review
NIOSH 9102 Mod, Ghost Wipe (288747)	/S/ Peter P. Steen 12/22/2021 13:25	/S/ Rex Bagley 12/22/2021 15:00

Laboratory Contact Information

ALS Environmental
960 W Levoy Drive
Salt Lake City, Utah 84123

Phone: (801) 266-7700
Email: als@alstlab.com
Web: www.alssl.com

**ANALYTICAL REPORT**Workorder: **34-2135152**

Client Project ID: Quantum Labs, San Jose, CA

Purchase Order: NA

Project Manager: Stella Hanis

General Lab Comments

The results provided in this report relate only to the items tested.

Samples were received in acceptable condition unless otherwise noted.

The following was provided by the client: Sample ID, Collection Date, Sampling Location, Media Type, Sampling Parameter.

Collection Date, Media Type, and Sampling Parameter can potentially affect the validity of the results.

Samples have not been blank corrected unless otherwise noted.

This test report shall not be reproduced, except in full, without written approval of ALS.

ALS provides professional analytical services for all samples submitted. ALS is not in a position to interpret the data and assumes no responsibility for the quality of the samples submitted.

All quality control samples processed with the samples in this report yielded acceptable results unless otherwise noted.

ALS is accredited for specific fields of testing (scopes) in the following testing sectors. The quality system implemented at ALS conforms to accreditation requirements and is applied to all analytical testing performed by ALS. The following table lists testing sector, accreditation body, accreditation number and website. Please contact these accrediting bodies or your ALS project manager for the current scope of accreditation that applies to your analytical testing.

Testing Sector	Accreditation Body (Standard)	Certificate Number	Website
Environmental	PJLA (DoD ELAP)	L20-57	http://www.pjlabs.com
	PJLA (ISO 17025)	L20-58	http://www.pjlabs.com
Industrial Hygiene	AIHA (ISO 17025 & AIHA IHLAP)	101574	http://www.aihaaccreditedlabs.org
	DOECAP-AP	L20-59	http://www.pjlabs.com
	Washington	C596	https://ecology.wa.gov/Regulations-Permits/Permits-certifications/Laboratory-Accreditation
Dietary Supplements	PJLA (ISO 17025)	L20-58	http://www.pjlabs.com

Definitions

LOD = Limit of Detection = MDL = Method Detection Limit, A statistical estimate of method/media/instrument sensitivity.

LOQ = Limit of Quantitation = RL = Reporting Limit, A verified value of method/media/instrument sensitivity.

ND = Not Detected, Testing result not detected above the LOD or LOQ.

NA = Not Applicable.

** No result could be reported, see sample comments for details.

< Means this testing result is less than the numerical value.

() This testing result is between the LOD and LOQ and has higher analytical uncertainty than values at or above the LOQ.



2135152



ANALYTICAL REQUEST FORM

2135152

1. ☐ REGULAR Status☒ RUSH Status Requested - ADDITIONAL CHARGE

RESULTS REQUIRED BY 12/22/21

DATE

CONTACT ALS SALT LAKE PRIOR TO SENDING SAMPLES

2. Date 12/9/21 Purchase Order No. _____

4. Quote No. _____

3. Company Name: AERO-ENVIRONMENTAL CONSULTING

ALS Project Manager: Stella Hanis

Address: 1426 VIA ISOLA

5. Sample Collection

MONTEREY, CA 93940

Sampling Site: QUANTUM LABS, SAN JOSE, CA

Person to Contact: JORGE VIZCAINO

Industrial Process: COBALT DECONTAMINATION

Telephone (831) 277-5831

Date of Collection: 12/14/2021

Fax Telephone () _____

Time Collected _____

E-mail Address: jorge@aero-enviro.com

Date of Shipment: 12/14/2021

Billing Address (if different from above) _____

Chain of Custody No.: _____

6. How did you first learn about ALS? _____

7. REQUEST FOR ANALYSES

Client Sample Number	Matrix*	Sample/Area Volume	ANALYSES REQUESTED - Use method number if known	Units**	Lab Comments
12-16-W1	Wipe	100 cm ²	Cobalt NIOSH 9102	100 cm ²	Floor
12-16-W2	" "	" "	" "	" "	Floor
12-16-W3	" "	" "	" "	" "	Floor
12-16-W4	" "	" "	" "	" "	Hood Roof
12-16-W5	" "	" "	" "	" "	Hood Roof
12-16-W6	" "	" "	" "	" "	Hood Roof
12-16-W7	" "	" "	" "	" "	on top of Table
12-16-W8	" "	" "	" "	" "	Floor
12-16-W9	" "	" "	" "	" "	Floor
12-16-W10	" "	" "	" "	" "	Floor
12-16-W11	" "	" "	" "	" "	FLOOR ROOM TEMSCAL
12-16-W12	" "	" "	" "	" "	FLOOR
12-16-W13	" "	" "	" "	" "	FLOOR
12-16-W14	" "	" "	" "	" "	FLOOR

* Specify: Solid sorbent tube, e.g. Charcoal; Filter type; Impinger solution; Bulk sample; Blood; Urine; Tissue; Soil; Water; Other

** 1. µg/sample 2. mg/m³ 3. ppm 4. % 5. µg/m³ 6. _____ (other) Please indicate one or more units in the column entitled Units**

Comments _____

Possible Contamination and/or Chemical Hazards _____

7. Chain of Custody (Optional)

Relinquished by	Date/Time	12/16/21
Received by	Date/Time	12-17-21 10:35
Relinquished by	Date/Time	
Received by	Date/Time	

960 West LeVoy Drive / Salt Lake City, UT 84123

800-356-9135 or 801-266-7700 / FAX: 801-268-9992

ALS Environmental

For lab use only



ANALYTICAL REQUEST FORM

1. ☐ REGULAR Status☒ RUSH Status Requested - ADDITIONAL CHARGERESULTS REQUIRED BY 12/22/21

DATE

CONTACT ALS SALT LAKE PRIOR TO SENDING SAMPLES

2. Date 12/9/21 Purchase Order No. _____

4. Quote No. _____

3. Company Name : AERO-ENVIRONMENTAL CONSULTINGALS Project Manager: Stella HanisAddress: 1426 VIA ISOLA

5. Sample Collection

MONTEREY, CA 93940Sampling Site: QUANTUM LABS, SAN JOSE, CAPerson to Contact: JORGE VIZCAINOIndustrial Process: COBALT DECONTAMINATIONTelephone (831) 277-5831Date of Collection: 12/9/2021 12/16/2021

Fax Telephone () _____

Time Collected _____

E-mail Address: jorge@aero-enviro.comDate of Shipment: 12/9/2021

Billing Address (if different from above) _____

Chain of Custody No.: _____

6. How did you first learn about ALS? _____

7. REQUEST FOR ANALYSES

Client Sample Number	Matrix*	Sample/Area Volume	ANALYSES REQUESTED - Use method number if known	Units**	Lab Comments
12-16-W15	Wipe	100 cm ²	Cobalt NIOSH 9102	100 cm ²	on Top of Table
12-16-W16	" "	" "	" "	" "	Top of Hood
12-16-W17	" "	" "	" "	" "	Top of Hood
12-16-W18	" "	" "	" "	" "	Top of Hood
12-16-W19	" "	NA	" "	" "	Field Blank
12-16-W20	" "	NA	" "	" "	Field Blank
12-16-W21	" "	100 cm ²	" "	" "	FLOOR
12-16-W22	" "	" "	" "	" "	FLOOR
12-16-W23	" "	" "	" "	" "	FLOOR
12-16-W24	" "	" "	" "	" "	FLOOR

* Specify: Solid sorbent tube, e.g. Charcoal; Filter type; Impinger solution; Bulk sample; Blood; Urine; Tissue; Soil; Water; Other

** 1. µg/sample 2. mg/m³ 3. ppm 4. % 5. µg/m³ 6. _____ (other) Please indicate one or more units in the column entitled Units**

Comments _____

Possible Contamination and/or Chemical Hazards _____

7. Chain of Custody (Optional)

Relinquished by <u>[Signature]</u>	Date/Time <u>12/16/21</u>
Received by <u>[Signature]</u>	Date/Time <u>12-17-21</u> <u>10:35</u>
Relinquished by _____	Date/Time _____
Received by _____	Date/Time _____

960 West LeVoy Drive / Salt Lake City, UT 84123

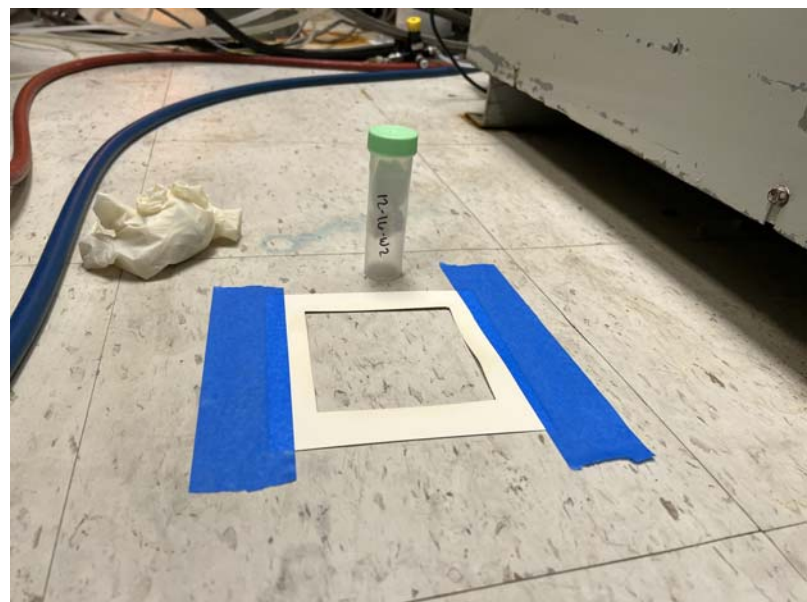
800-356-9135 or 801-266-7700 / FAX: 801-268-9992

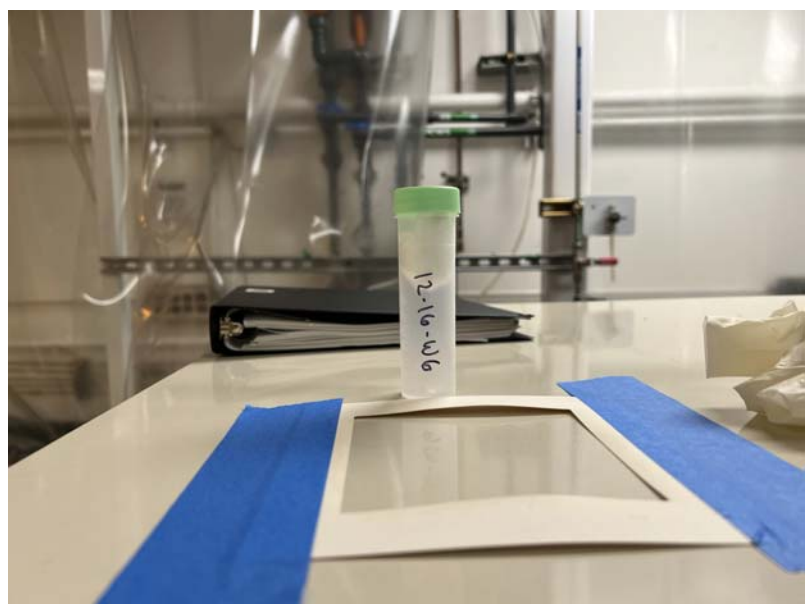
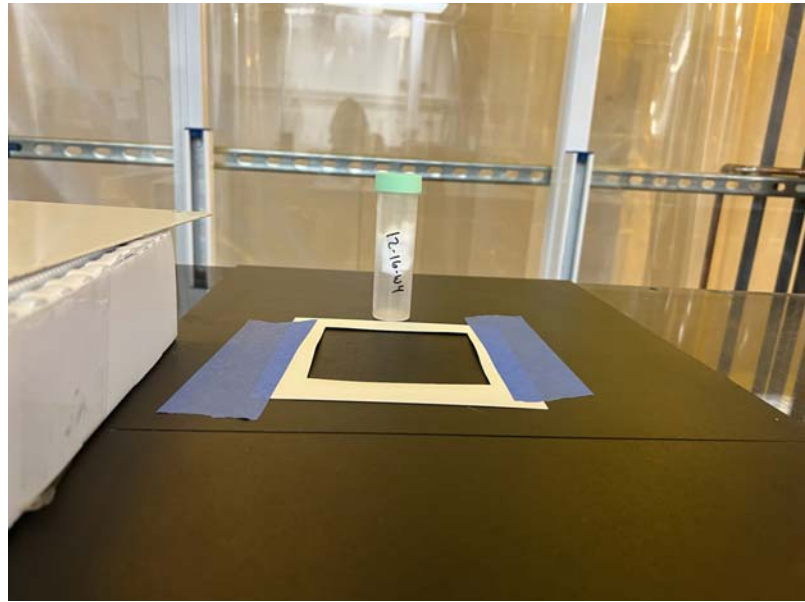
ALS Environmental

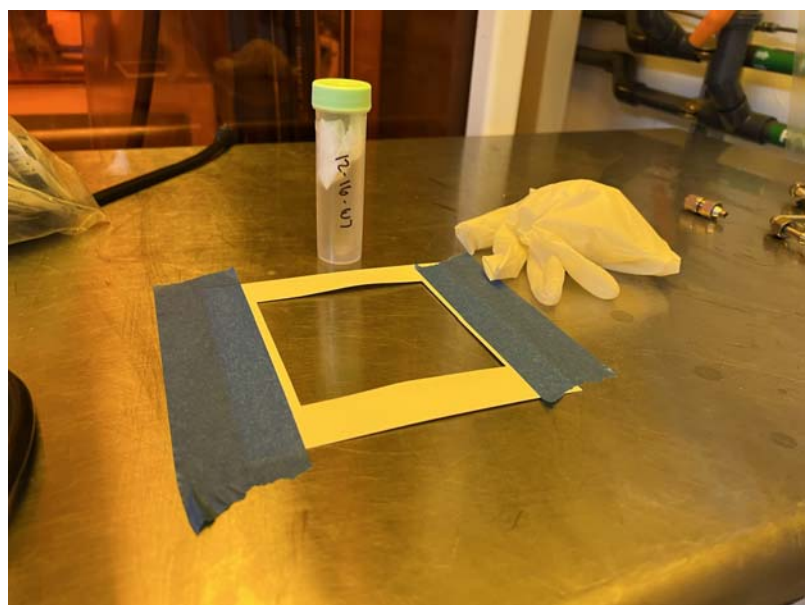


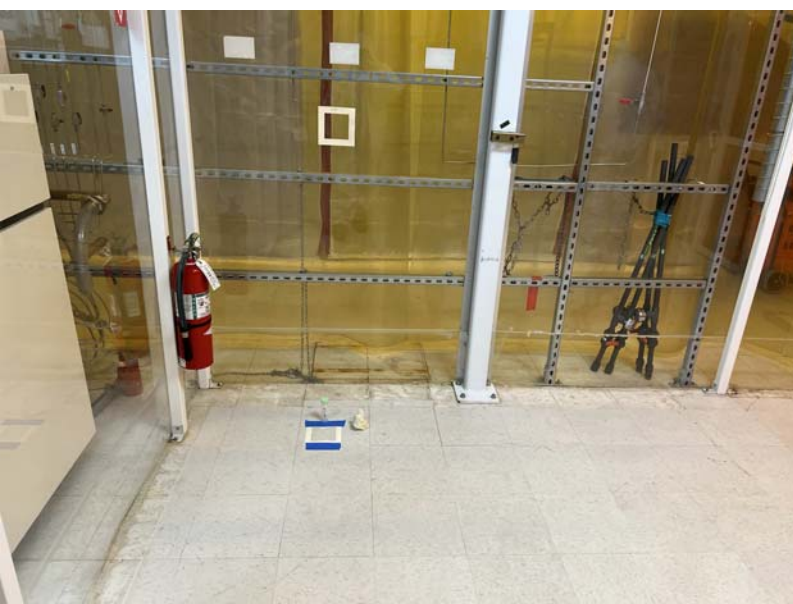
831.394.1199 E-Mail: Jorge@aero-enviro.com www.Aero-Enviro.com

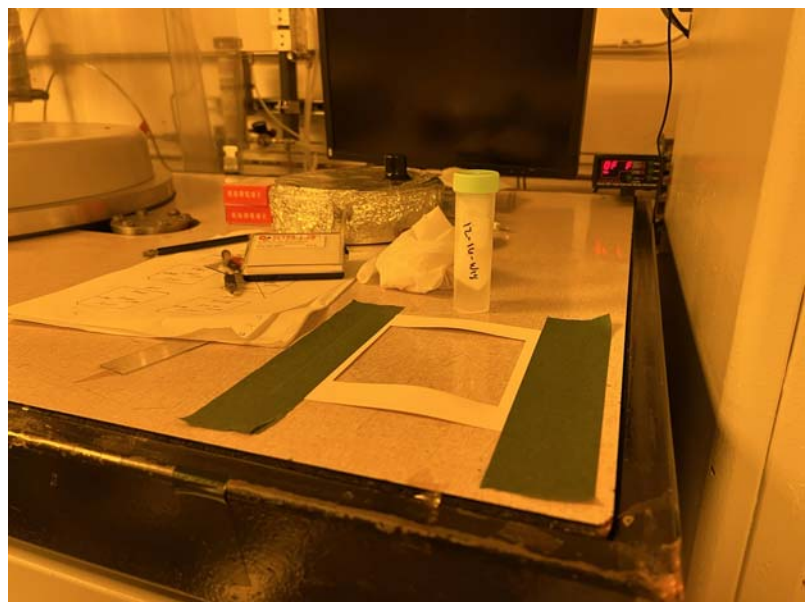
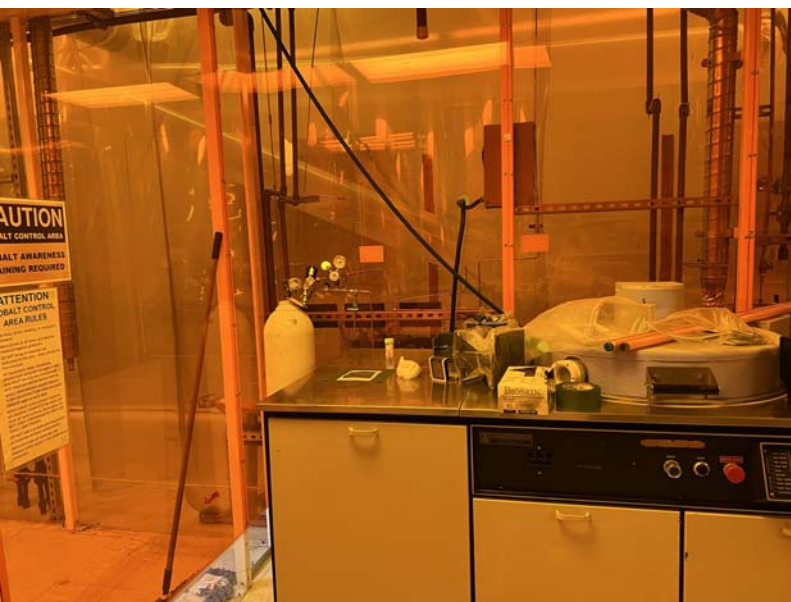
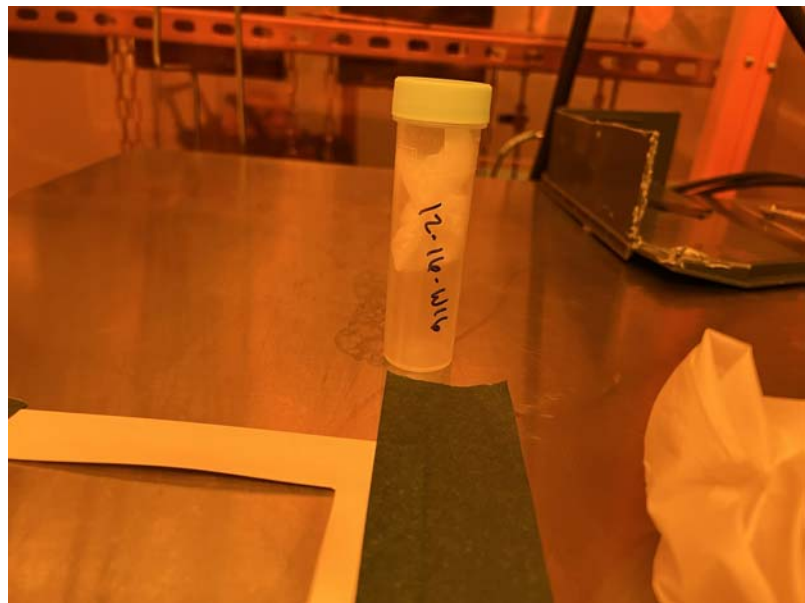
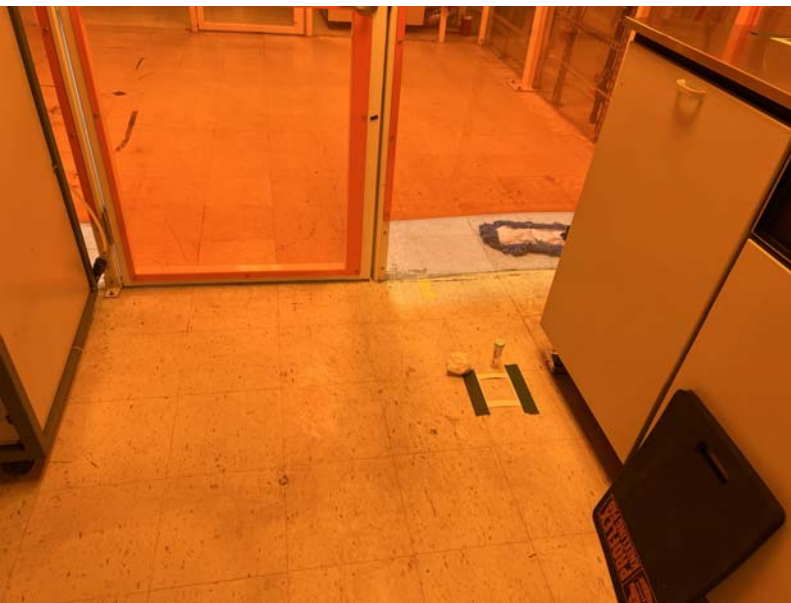
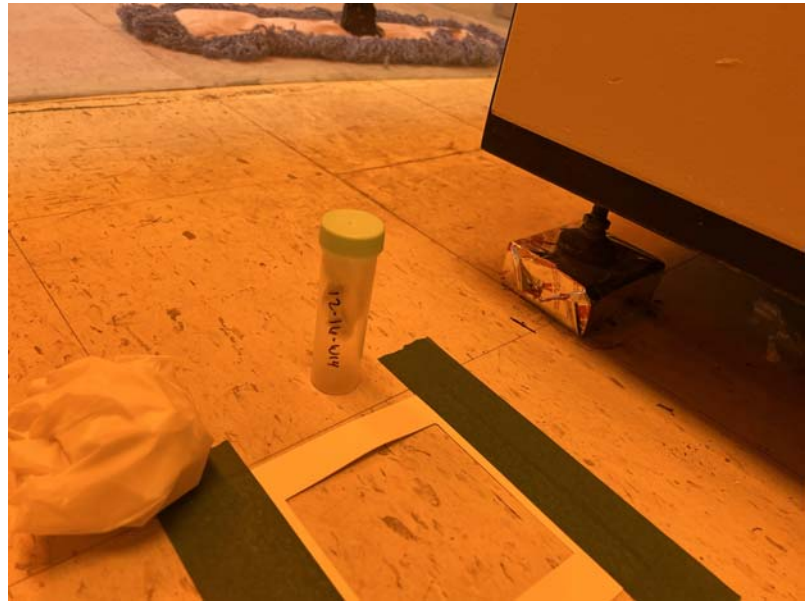
APPENDIX B-PHOTOGRAPHIC DOCUMENTATION

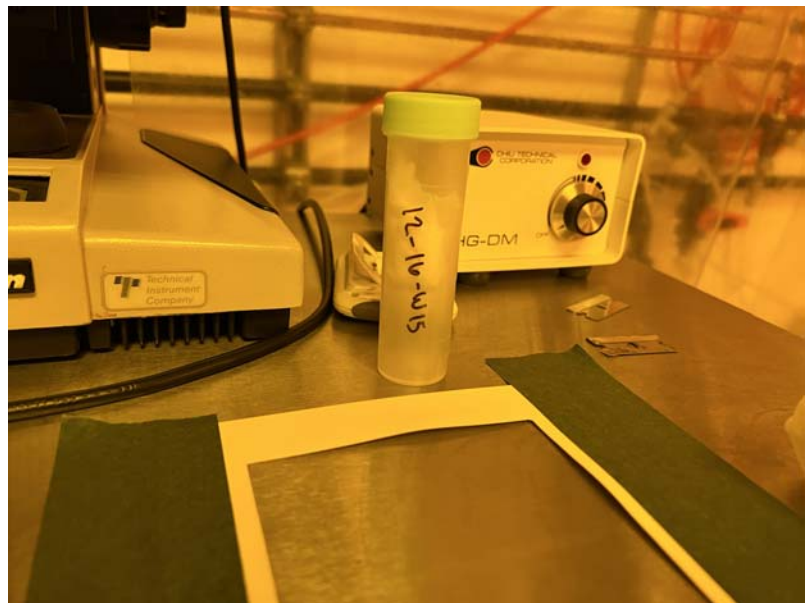
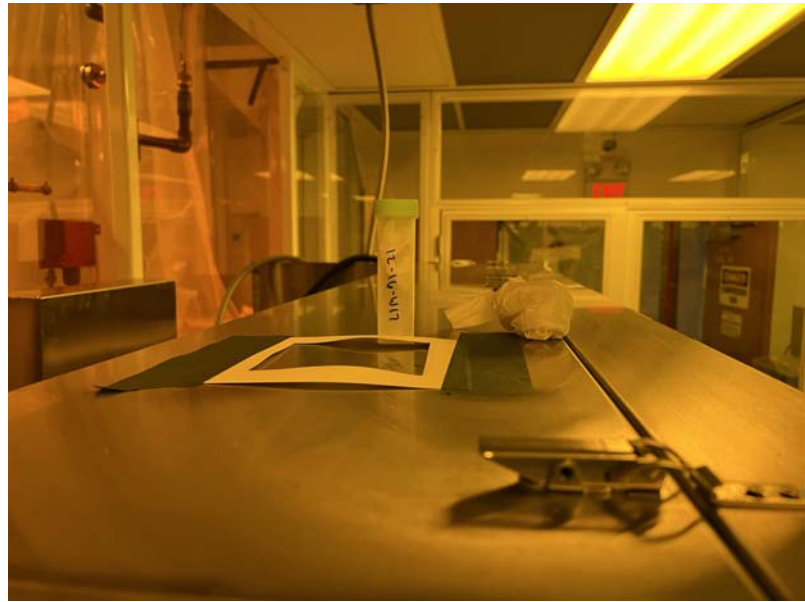
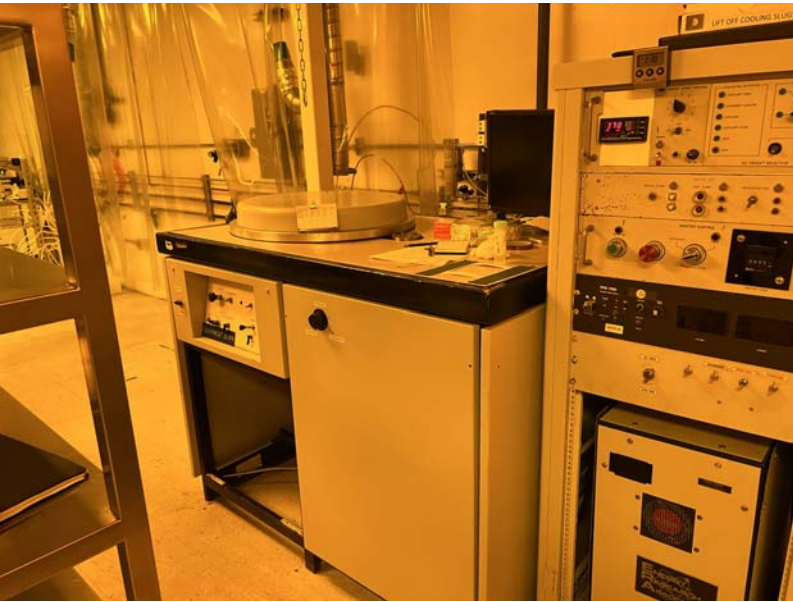


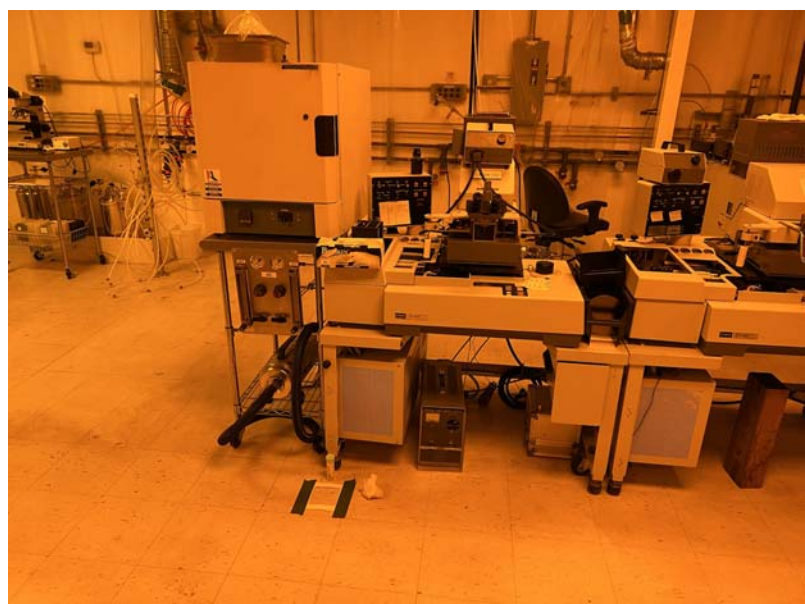
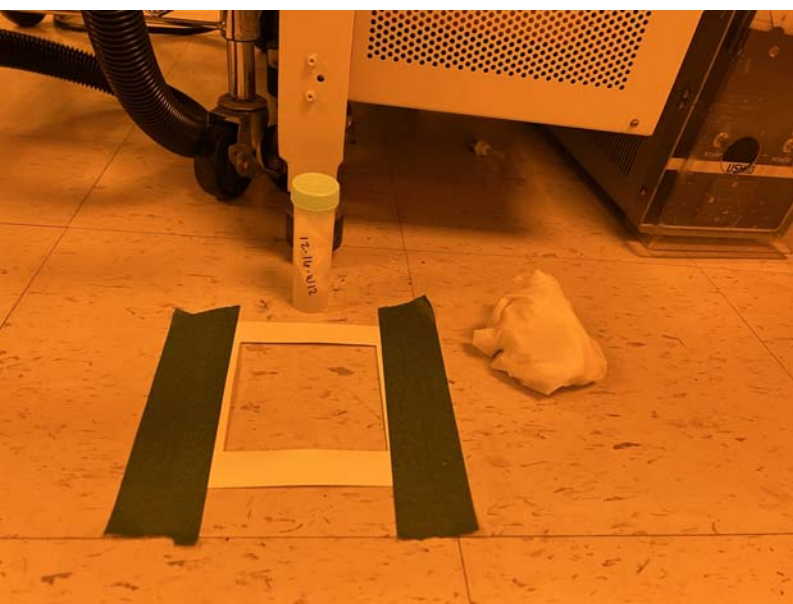


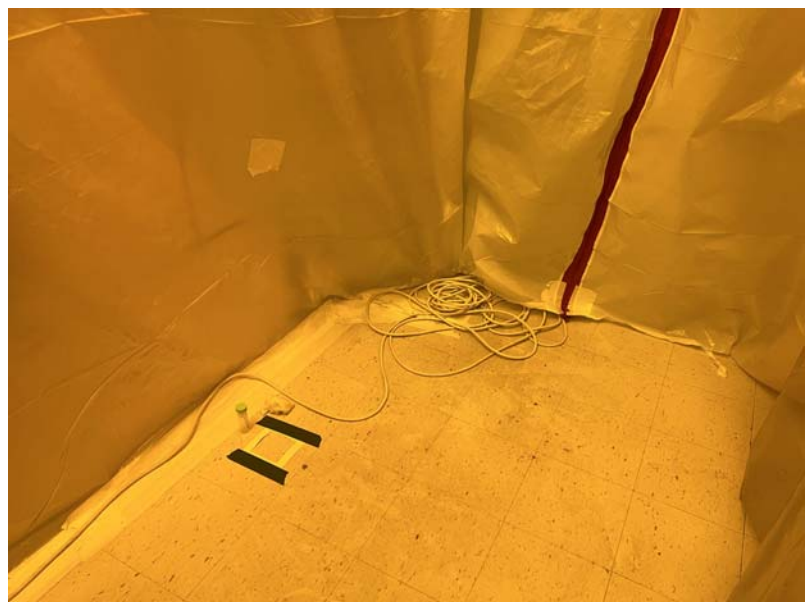
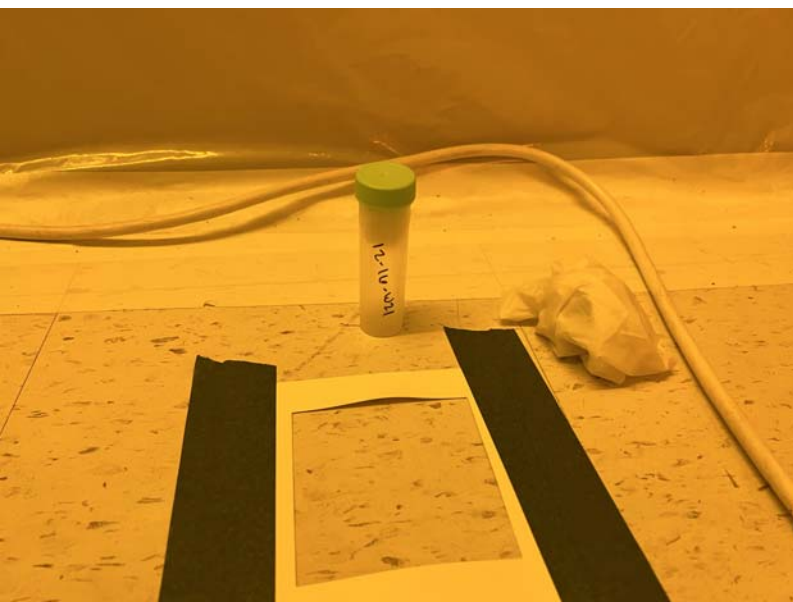
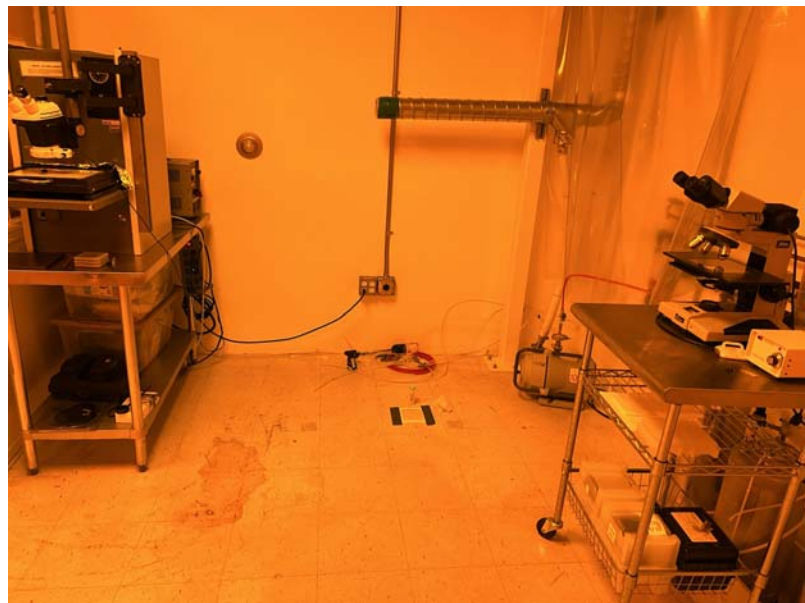
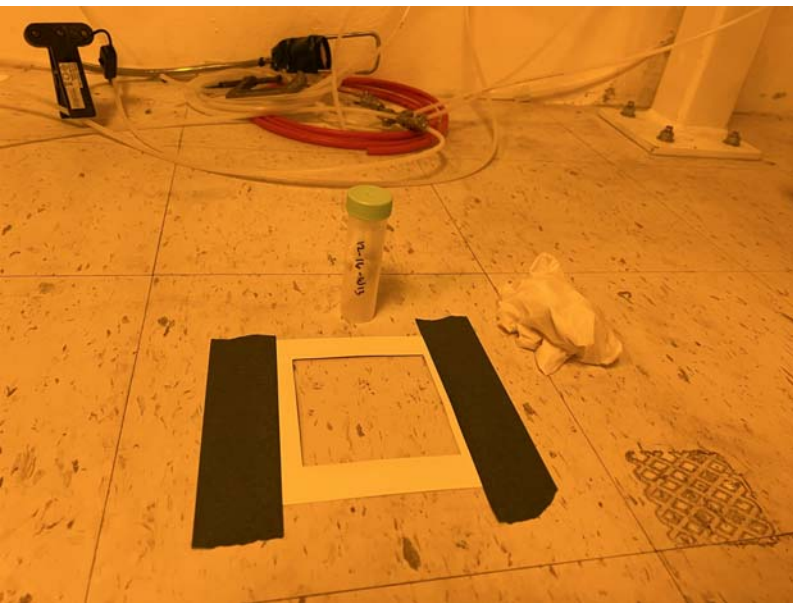
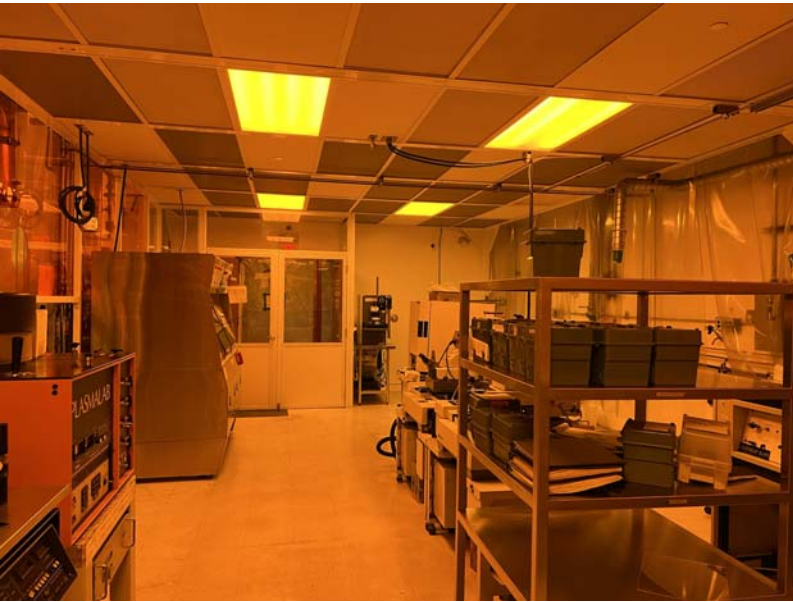


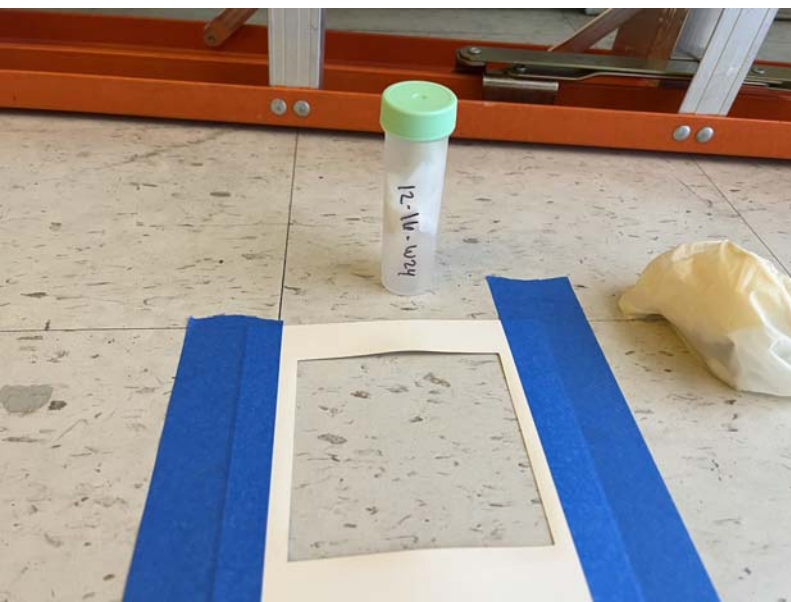
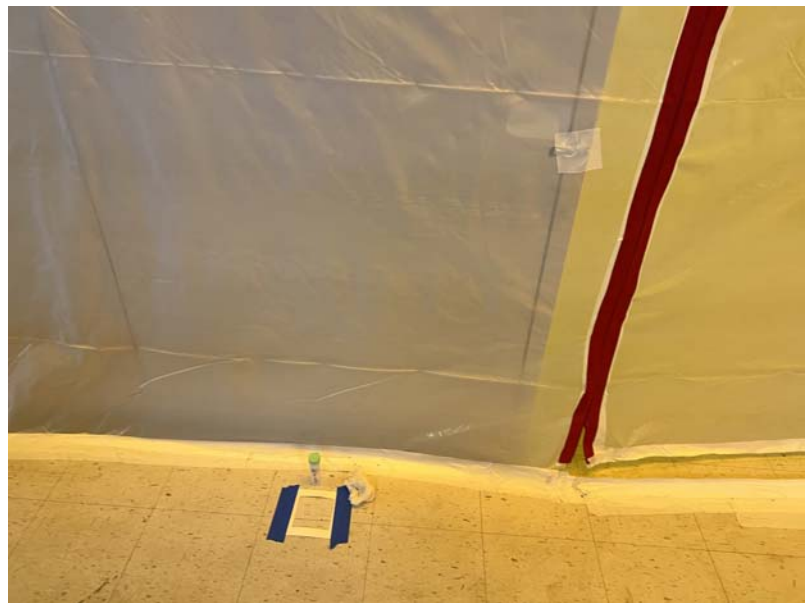
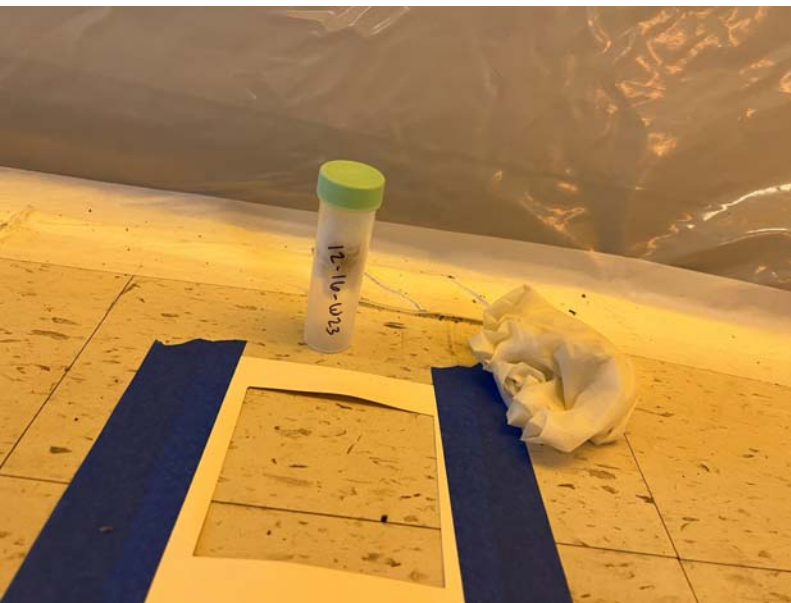
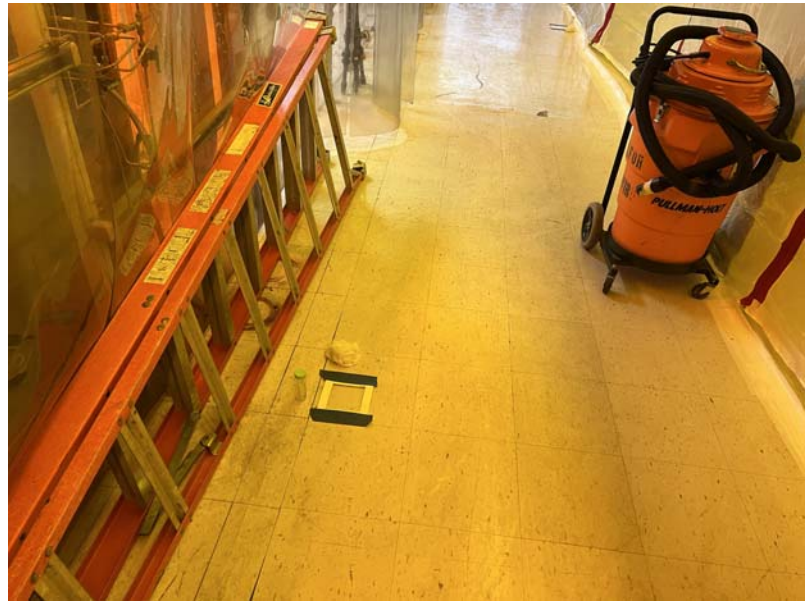


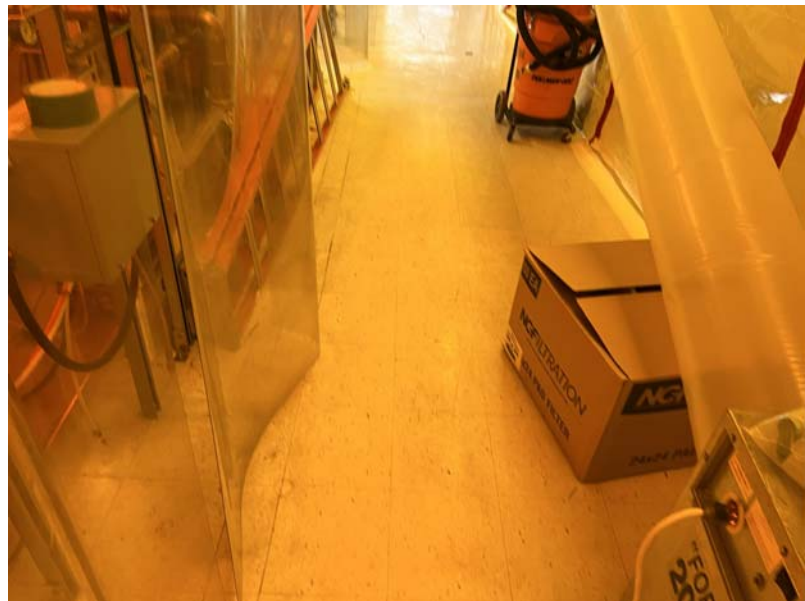
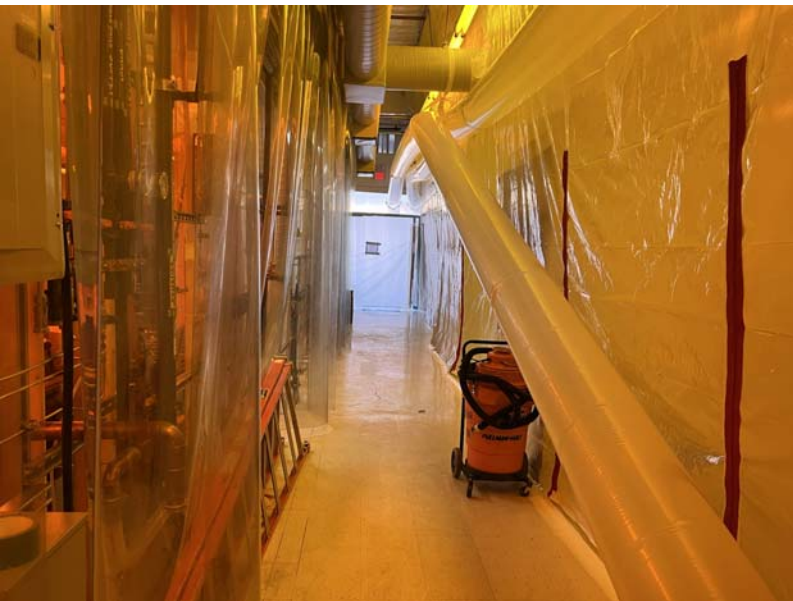














831.394.1199 E-Mail: Jorge@aero-enviro.com www.Aero-Enviro.com

APPENDIX C-PROFESSIONAL CERTIFICATIONS

State of California
Division of Occupational Safety and Health
Certified Asbestos Consultant

Jorge Ignacio Vizcaino

Name



Certification No. 04-3554

Expires on 04/15/22

This certification was issued by the Division of Occupational Safety and Health as authorized by Sections 7160 et seq. of the Business and Professions Code.

The Board for Global EHS Credentialing (BGC)

through its vested authority, hereby confirms that

Jorge I. Vizcaino

has met all requirements of education, experience, and examination, and on-going maintenance set forth through the BGC's American Board of Industrial Hygiene®'s (ABIH®) credentialing division for re-certification in the Comprehensive Practice of Industrial Hygiene and is thereby conferred the credential of

Certified Industrial Hygienist® (CIH®)

The aforementioned individual is given all rights, privileges, and responsibilities as both a diplomate of the BGC and holder of the CIH credential, provided that the credential is not suspended or revoked, and it is renewed annually. Moreover, the holder must meet all recertification requirements, including the obligation to practice ethically as prescribed by the BGC.



Credential Number: 9814 CP

Award Date: October 4, 2010

Expiration Date: June 1, 2026

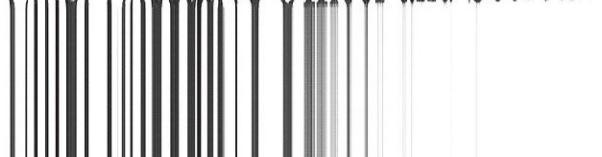
A handwritten signature in blue ink, reading "Cynthia Hanko", written over a horizontal line.

Cynthia Hanko, CIH
Chair of the Board of Directors



A handwritten signature in blue ink, reading "Ulric K. Chung", written over a horizontal line.

Ulric K. Chung, MCS, PhD
Chief Executive Officer and Secretary



From: recertinfo@ihmm.org
To: [Jorge Vizcaino](#)
Subject: Congratulations on Recertifying Your CHMM!
Date: Thursday, November 5, 2020 10:38:14 AM

Dear Vizcaino,

Congratulations on successfully recertifying your CHMM credential! Thank you for your continued effort in safety when working with hazardous materials. You are one of the many reasons why this world is a safer place to live. The amount of time you have taken to recertify has not gone unnoticed by the IHMM staff.

Your recertification application has been processed for the cycle ending 10/31/2021. Your new credential expiration date is 10/31/2026.

Please use this electronic copy of your **CHMM Letter of Compliance** as proof of credential and for any third-party verification needs until your presentation copies of your CHMM Letter of Compliance (proof of credential) and Certificate (suitable for display) arrive.

IHMM certifications are the standard of excellence in the hazardous materials industry. As an IHMM credential holder, you can:

- Validate your expertise in many areas
- Distinguish yourself in a competitive marketplace
- Increase your employment options
- Demonstrate ongoing competence
- Expand your professional network
- Benefit from public sector outreach
- Receive global recognition

You are now authorized to continue using your credential designation through the expiration date listed in your *MyIHMM* account online and on your certificate as long as you adhere to the CHMM Code of Ethics, remain in good standing, and maintain all required fees.

Remember to regularly access your *MyIHMM* account to monitor your certification and fee due dates, to maintain your record's accuracy and to keep abreast of certification news. As a Certificant you agree to the proper use of the logo and acronym designation, and to surrender the certificate in the event of withdrawal of certification by IHMM.

We appreciate your continued support of IHMM and your commitment to the professional excellence embodied in your credential.

Sincerely,



Gene Guilford
Executive Director



Institute of Hazardous Materials Management
9210 Corporate Blvd., Suite 470 | Rockville, MD 20850
(301) 984-8969 | (301) 984-1516 fax





STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC HEALTH



LEAD-RELATED CONSTRUCTION CERTIFICATE

INDIVIDUAL:



Jorge Vizcaino

CERTIFICATE TYPE:

Lead Inspector/Assessor

NUMBER:

LRC-00001930

EXPIRATION DATE:

11/3/2022

Disclaimer: This document alone should not be relied upon to confirm certification status. Compare the individual's photo and name to another valid form of government issued photo identification. Verify the individual's certification status by searching for Lead-Related Construction Professionals at www.cdph.ca.gov/programs/clppb or calling (800) 597-LEAD.





STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC HEALTH



LEAD-RELATED CONSTRUCTION CERTIFICATE

INDIVIDUAL:



David Kummer

CERTIFICATE TYPE:

Lead Sampling Technician

NUMBER:

LRC-00007343

EXPIRATION DATE:

10/27/2022

Disclaimer: This document alone should not be relied upon to confirm certification status. Compare the individual's photo and name to another valid form of government issued photo identification. Verify the individual's certification status by searching for Lead-Related Construction Professionals at www.cdph.ca.gov/programs/clppb or calling (800) 597-LEAD.